

**Processed CSMIP Strong-Motion Data From The
CAPE MENDOCINO/PETROLIA EARTHQUAKE
of April 25, 1992: Release No. 1**

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Report No. OSMS 92-12

California Strong Motion Instrumentation Program

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INTRODUCTION

The strong-motion records recovered from 14 stations after the Cape Mendocino/Petrolia earthquakes of April 25 and 26, 1992 are presented in Shakal and others (1992). This report presents the digitized and processed data from 6 stations that recorded the M_w 7.0 (M_s 7.1) mainshock on April 25 (Figure 1). This earthquake produced some of the highest accelerations ever recorded. The ground response station at Cape Mendocino station recorded a peak acceleration near 2 g. This is the largest acceleration ever recorded in California. Also, some of the highest accelerations ever recorded on a structure, 1.23 g and 1.38 g, occurred on the deck and on the ground near the west abutment of the Rio Dell freeway overpass, respectively.

The processing results from 3 stations, including 2 ground-response stations and a freeway bridge, are final. These stations are:

- Shelter Cove - Airport
- Eureka - Myrtle & West Avenue
- Rio Dell - Hwy 101/Painter St. Overpass (20 channels)

This release also includes preliminary processing results for the records from 4 additional ground-response stations including:

- Cape Mendocino
- Petrolia
- Rio Dell - Hwy 101/Painter St. Free Field
- Fortuna - 701 S. Fortuna Blvd.

A preliminary release of the processed data for these 4 records is being made because of their unprecedeted long-period content, probably due to the large magnitude of the earthquake. In addition, unprecedeted short-period content was recorded at the Cape Mendocino station, probably due to the proximity of the source and the site conditions (hard sandstone). The bandwidth of the data extends beyond the traditional broadest bandwidth used by CSMIP, which dates back to the Caltech Bluebook processing. This bandwidth is 0.05-0.07 to 23-25 Hz, or 0.04 to 15 seconds period. The data appear to have reliable signal beyond 15 seconds period, but we need to extend the noise analysis of the CSMIP digitization system to increase knowledge about the noise in this period range. The Cape Mendocino record may also have reliable signal content above 25 Hz, and the final processing may be able to recover these frequencies. In the meantime, this preliminary release of the processed data within the traditional 0.04 to 15 sec bandwidth is being made so that users will not be delayed from analyzing the data. We expect the final release to differ inconsequentially in acceleration and response spectra (except at Cape Mendocino); differences will be small in velocity, but could be important in long-period displacement.

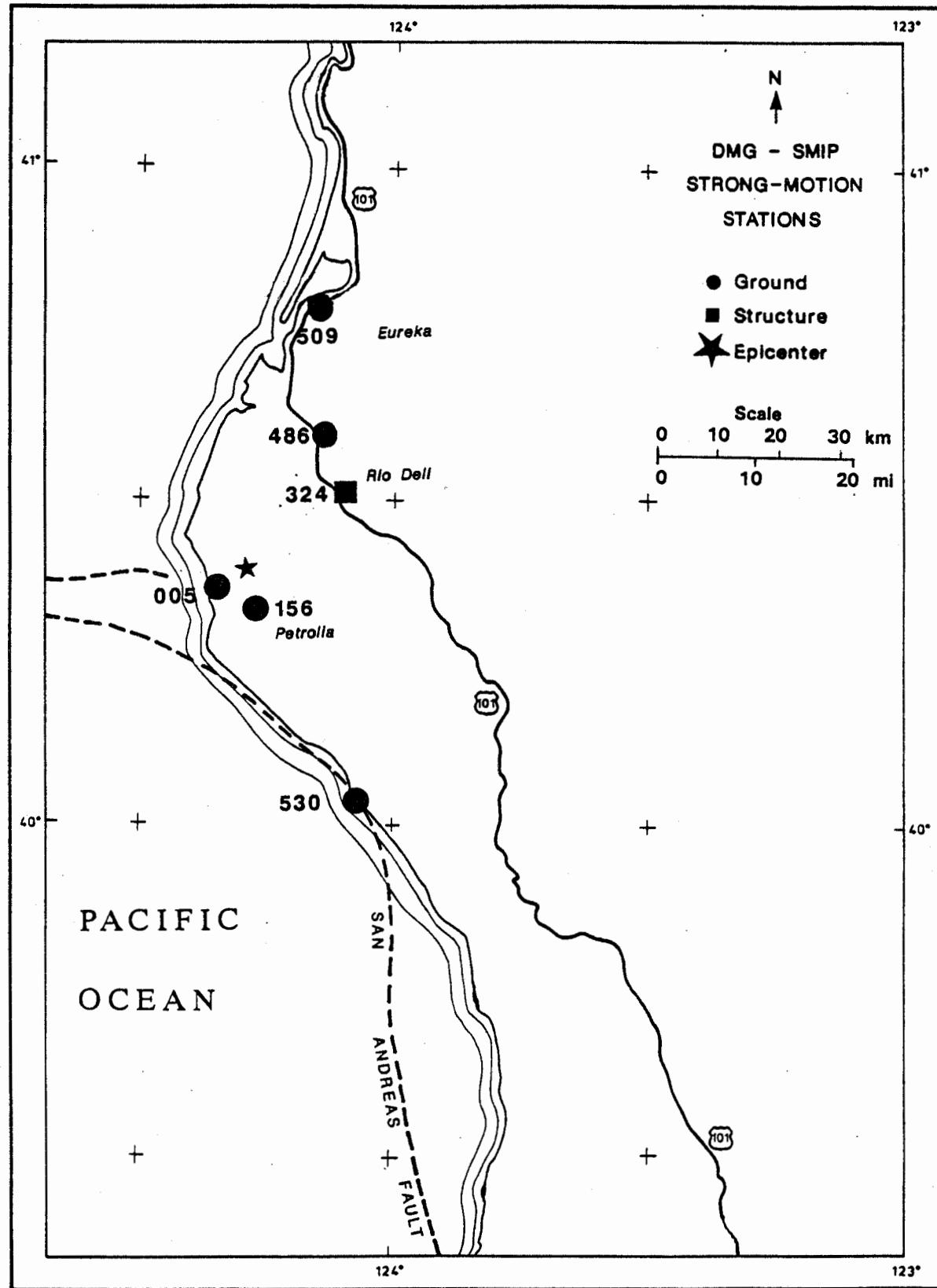


Figure 1. Location of the epicenter and major faults in the vicinity of the 25 April 1992 earthquake near Cape Mendocino. Solid circles indicate the locations of CSMIP ground-response stations for which digitized records are presented in the report. The solid square is the location of the Rio Dell bridge for which digitized records are also presented in the report. The 3-digit code identifies CSMIP stations as follows:

005	Cape Mendocino	486	Fortuna - 701 S. Fortuna Blvd.
156	Petrolia	509	Eureka - Myrtle & West Avenue
324	Rio Dell - 101/Painter St. Overpass	530	Shelter Cove - Airport

For each station there is a group of plots which is identified by a set number at the upper corner of each page as follows:

<u>Set No.</u>	<u>Station Name</u>	<u>No. of Channels</u>
Ground-Response Stations:		
1	Cape Mendocino	3
2	Petrolia	3
3	Rio Dell - Hwy 101/Painter St. Free Field	3
4	Fortuna - 701 S. Fortuna Blvd.	3
5	Shelter Cove - Airport	3
6	Eureka - Myrtle & West Avenue	3
Instrumented Bridge:		
7	Rio Dell - Hwy 101/Painter St. Overpass	20

The order of the plots for each station is as follows:

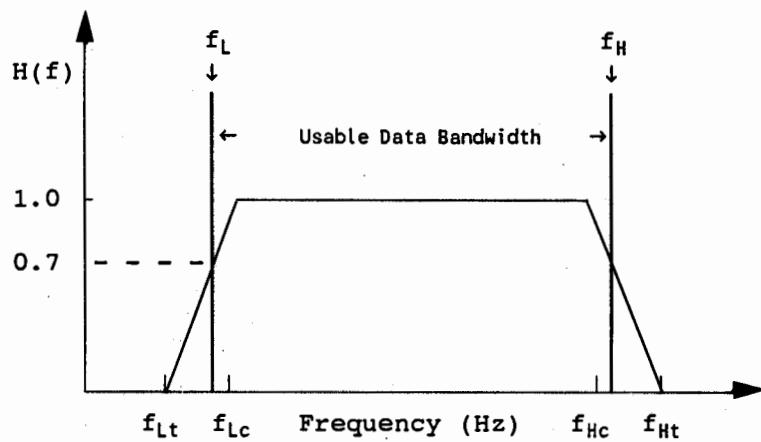
1. Phase 1 (Vol. 1) data: uncorrected accelerations. Acceleration for the first 22 seconds is plotted with a common scaling factor for all channels; three channels are plotted on one page. This plot is followed by a second plot of the full processed length of 60 seconds with each channel individually scaled. In addition, for the bridge the raw record for the first 44 seconds with all channels from a recorder on a single page is also presented (there are two recorders on the bridge.)
2. Phase 2 (Vol. 2) data: instrument and baseline-corrected acceleration, velocity and displacement. The data for the full processed length are plotted with equal scaling for all channels. The filter frequencies used in the processing are indicated on the plots (see Usable Data Bandwidth).
3. Phase 3 (Vol. 3) data: response spectra. The pseudo-velocity spectra (PSV), the pseudo-acceleration spectra (PSA), the displacement spectra (SD) and the Fourier amplitude spectra (FS) are presented on a tripartite logarithmic plot for each channel for 0%, 2%, 5%, 10%, and 20% dampings. The spectra are plotted for periods within the Usable Data Bandwidth.
4. Phase 3 (Vol. 3) data: response spectra. The absolute acceleration spectra (SA) for 0%, 2%, 5%, 10% and 20% dampings are plotted against period with linear-linear scaling.

REFERENCE

Shakal, A., R. Darragh, M. Huang, T. Cao, R. Sherburne, R. Sydnor, P. Malhotra, C. Cramer, J. Wampole, P. Fung and C. Petersen, 1992, CSMIP strong-motion records from the Petrolia, California earthquakes of April 25-26, 1992, Calif. Div. Mines and Geology, Report No. OSMS 92-05, 74 p.

DEFINITION OF USABLE DATA BANDWIDTH

The filter bands for each record are indicated on the plots for the Phase 2 and Phase 3 data. The digitized data are processed and filtered using Ormsby filters. The data are first low-pass filtered using a high-frequency filter with a corner frequency of 23 Hz and a roll-off termination frequency of 25 Hz. Then the data are high-pass filtered using a low-frequency filter with a corner frequency of 0.07 Hz and a roll-off termination of 0.05 Hz. Therefore, the Phase 2 data is the result of the digitized data being filtered by the bandpass filter $H(f)$ with ramps as shown in the figure:



The usable data bandwidth is defined as the band between frequencies f_H and f_L , where f_H and f_L are the -3 dB points on the high-frequency and low-frequency ramps, respectively. The value of $H(f)$ is approximately equal to 0.7 for -3 dB (see Notes). The user should only use these data for analyses within this bandwidth.

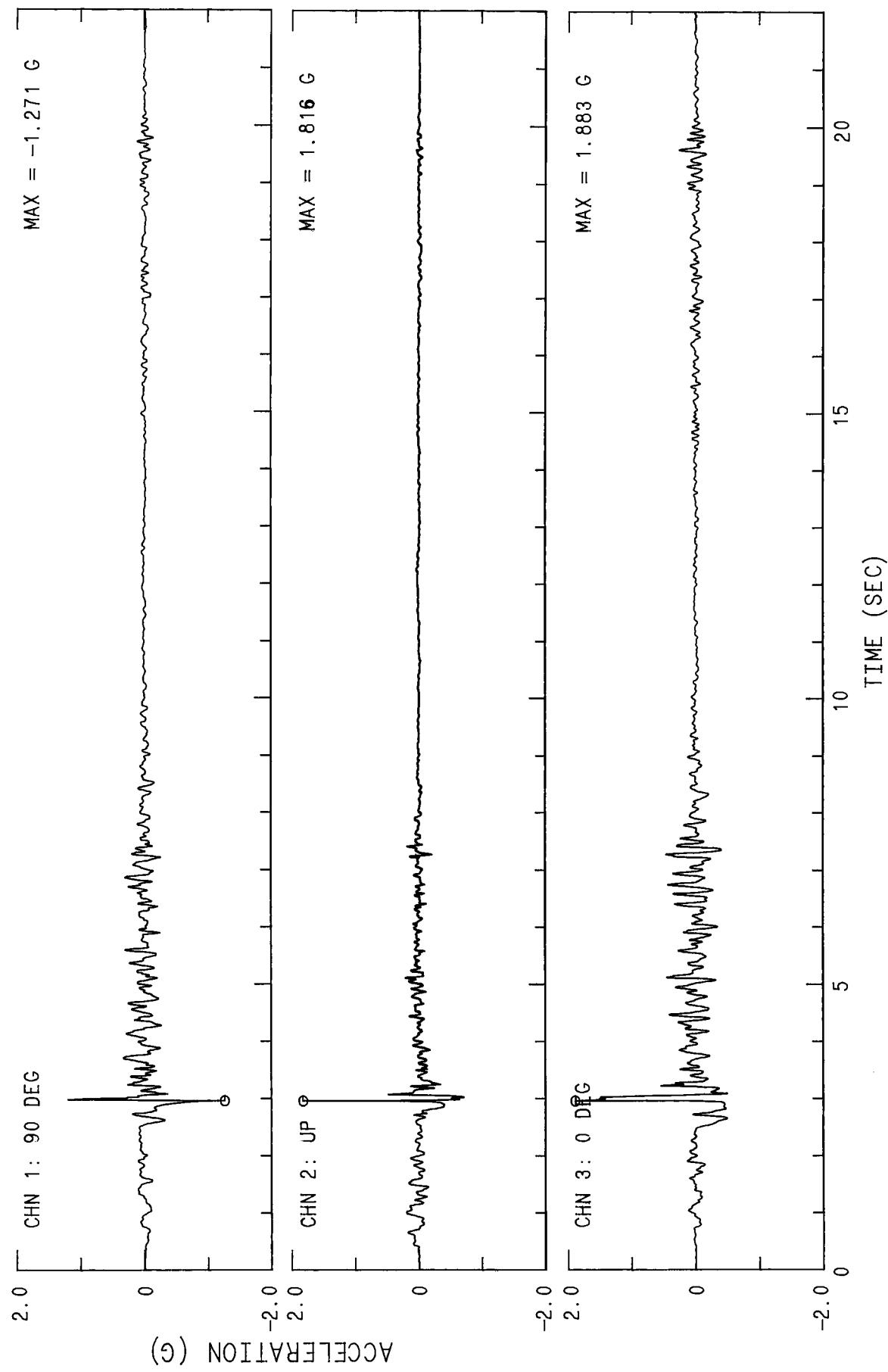
Notes:

- 1) The values of f_H and f_L can be calculated from the corner frequencies (f_{Hc} , f_{Lc}) and the roll-off termination frequencies (f_{Ht} , f_{Lt}) used in the processing by using the formulas $f_H = f_{Hc} + 0.3 * (f_{Ht} - f_{Hc})$ and $f_L = f_{Lc} - 0.3 * (f_{Lc} - f_{Lt})$. For the preliminary processing, the usable data bandwidth for data bandpass-filtered with ramps at 0.05 to 0.07 Hz and 23.0 to 25.0 Hz is 0.064 Hz to 23.6 Hz (0.04 to 15 seconds period).
- 2) It is common in signal processing to plot $20 \log_{10}[H(f)]$ versus frequency, and express the ordinate value in decibels (abbreviated dB). Accordingly, 0 dB corresponds to a value of $H(f)$ equal to 1; 20 dB is equivalent to $H(f) = 10$, and -20 dB corresponds to $H(f) = 0.1$. Thus, at the -3 dB frequency point, the amplitude of the transfer function, $H(f)$ is reduced to 0.7, while the power transmitted by the filter, $H^2(f)$, is reduced to 0.5.

CAPE MENDOCINO EQ. (PRELIM. PROCESS.)

CAPE MENDOCINO

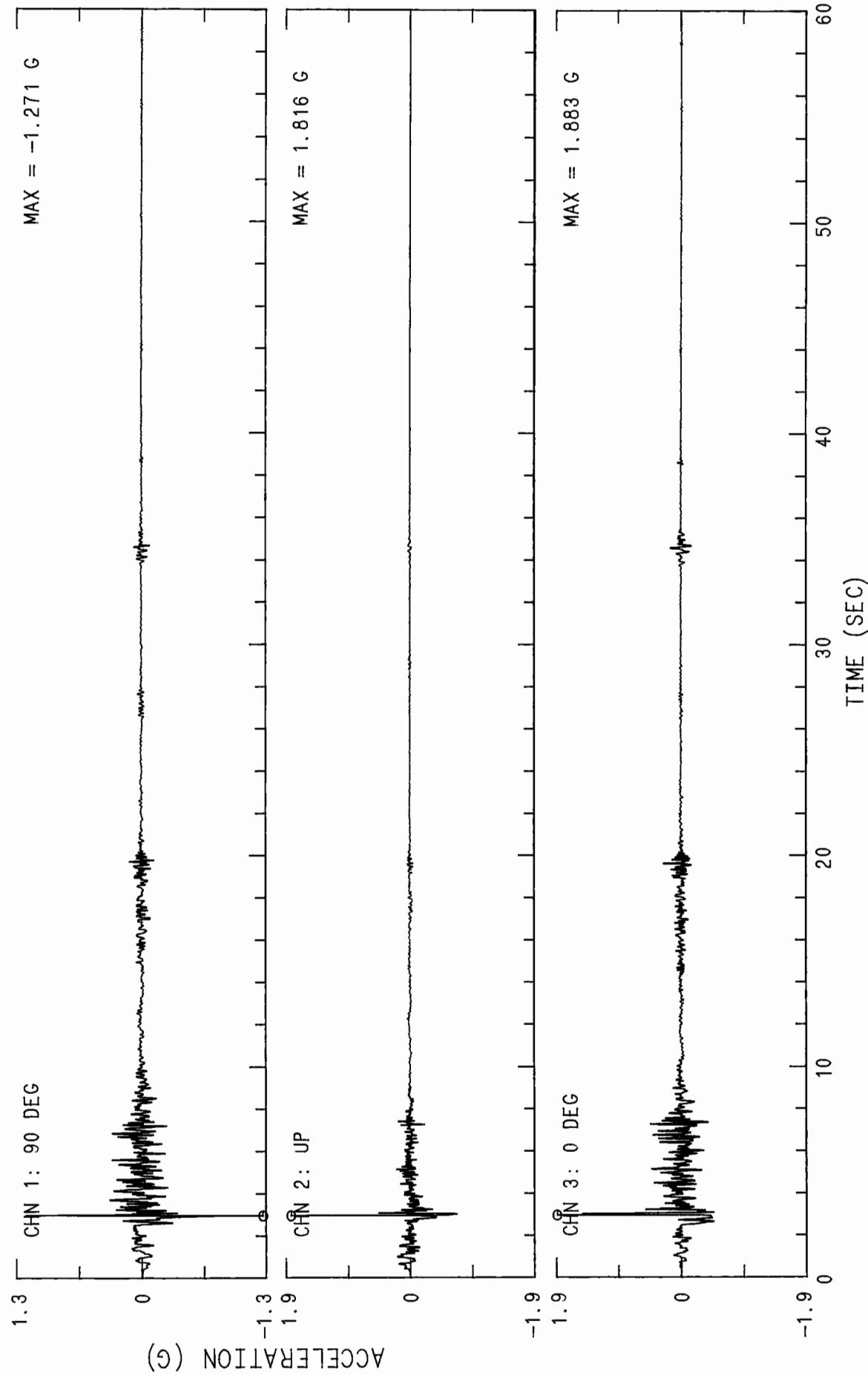
UNCORRECTED ACCELEROMGRAM 89005-S2596-92118.03 111872.0848-QP92A005



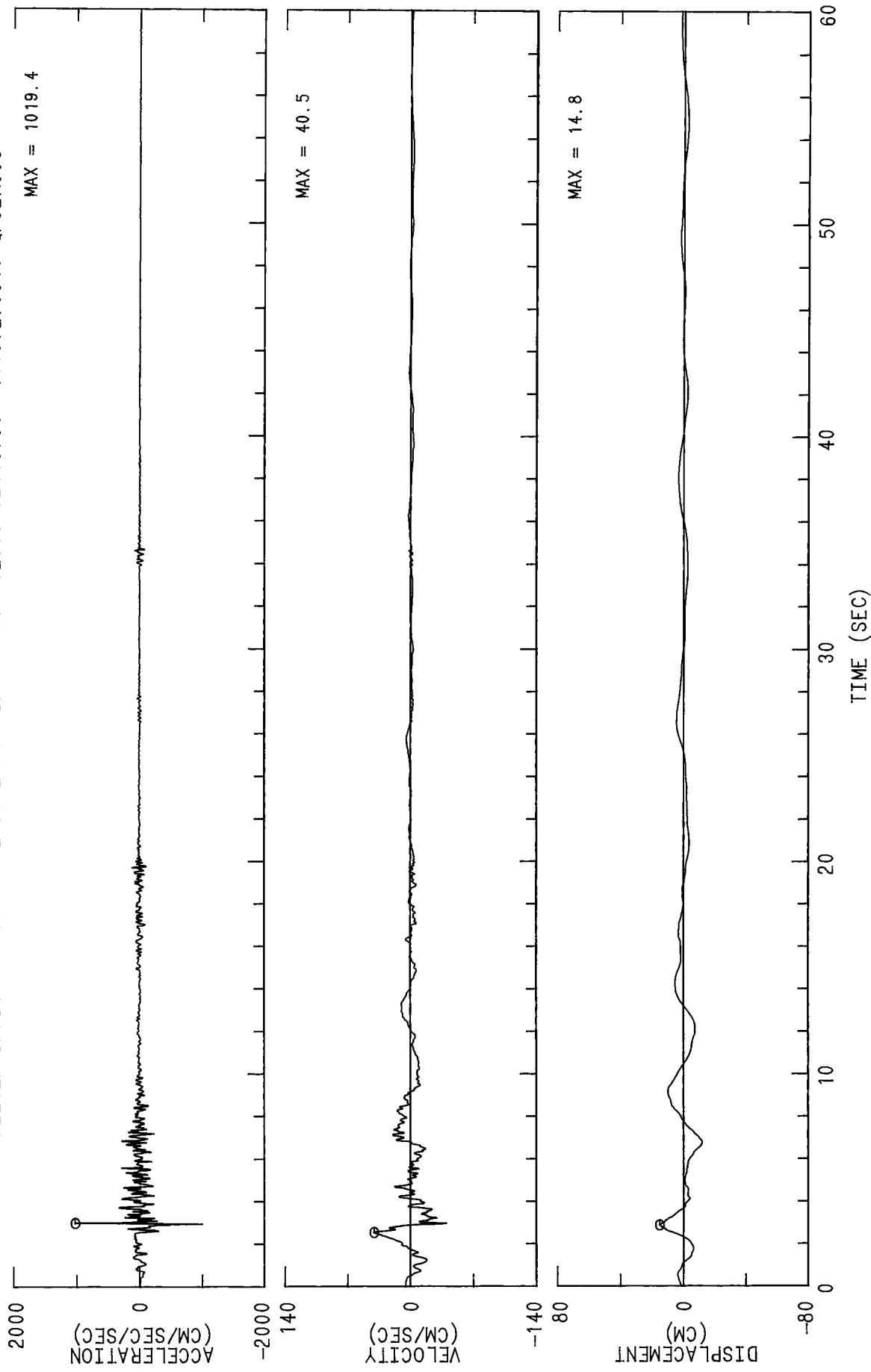
CAPE MENDOCINO EQ. (PRELIM. PROCESS.) APRIL 25, 1992 11:06 PDT

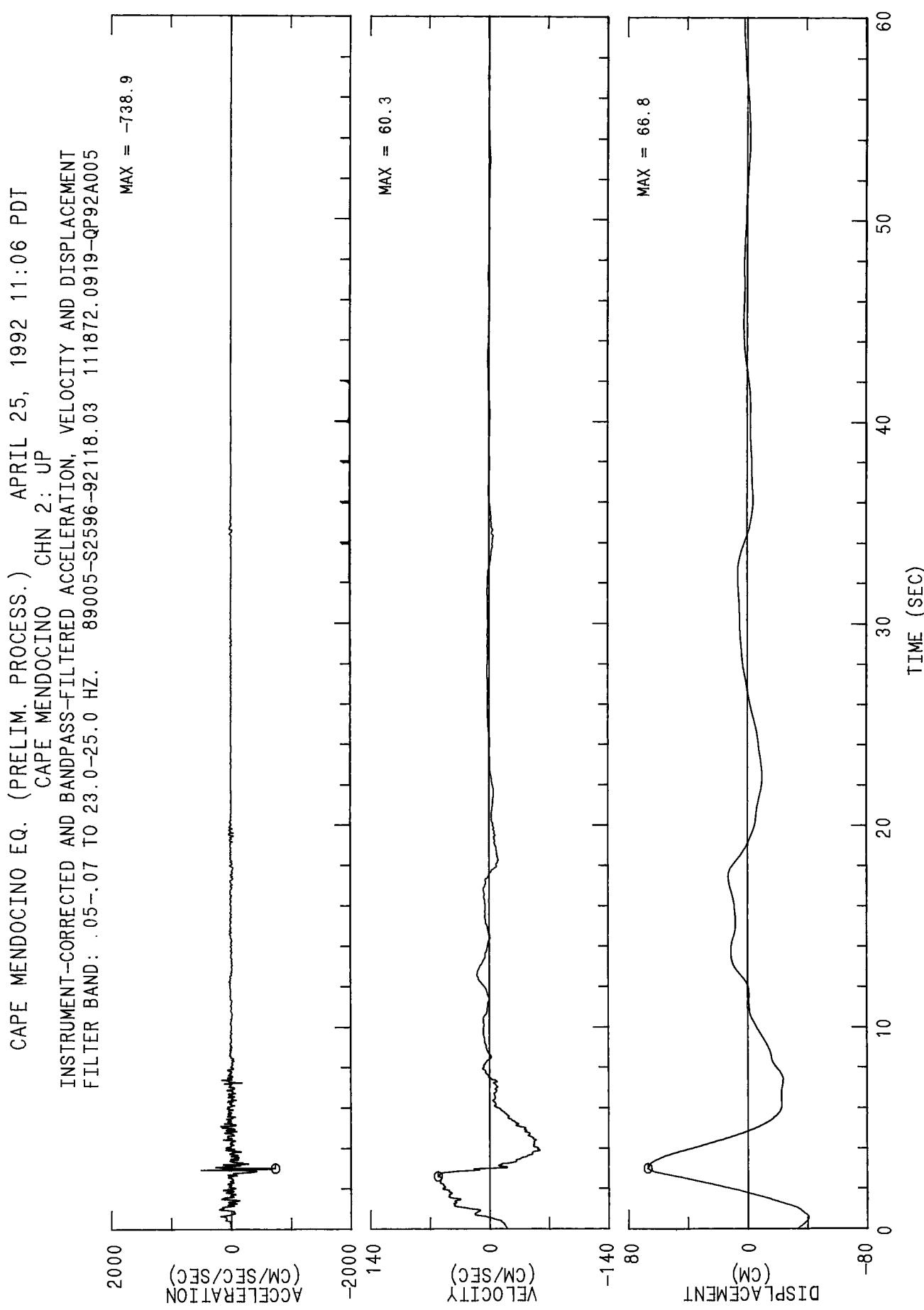
CAPE MENDOCINO

UNCORRECTED ACCELEROMGRAM 89005-S2596-92118.03 111872.0848-QP92A005

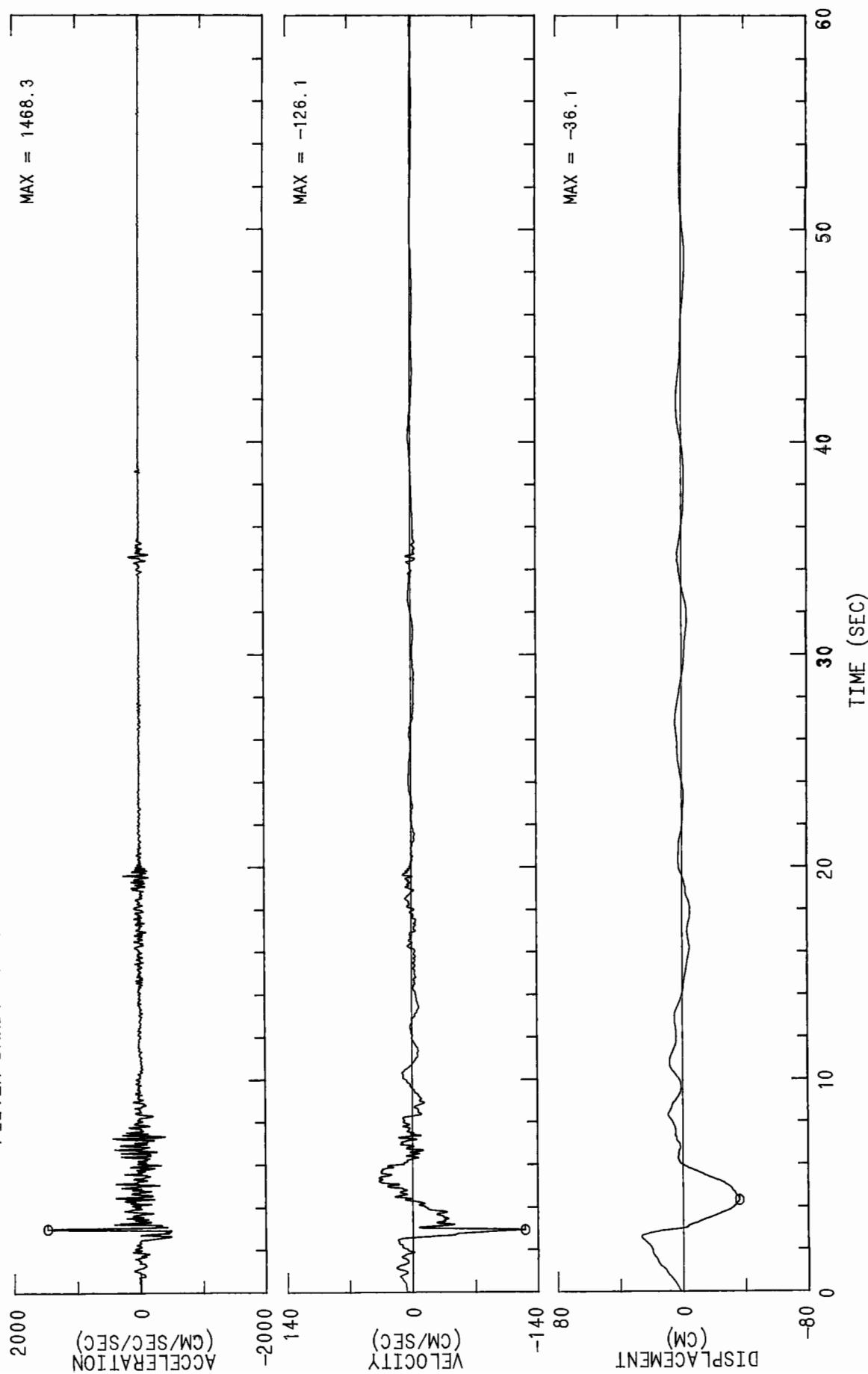


CAPE MENDOCINO EQ. (PRELIM. PROCESS.) APRIL 25, 1992 11:06 PDT
CAPE MENDOCINO CHN 1: 90 DEG
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND : .05-.07 TO 23.0-25.0 HZ. 89005-S2596-92118.03 111872.0919-QP92A005

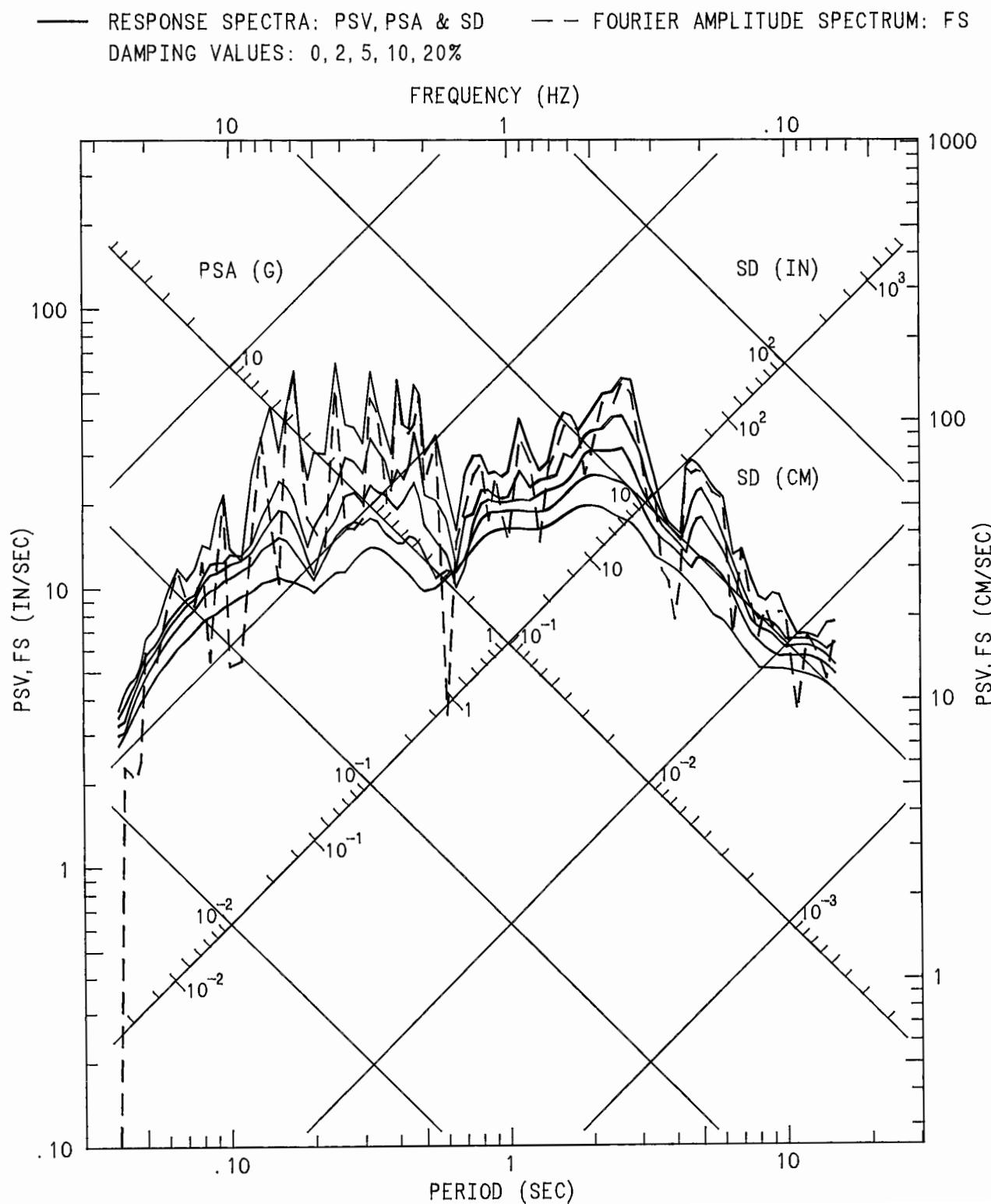




CAPE MENDOCINO EQ. (PRELIM. PROCESS.) APRIL 25, 1992 11:06 PDT
CAPE MENDOCINO CHN 3: 0 DEG
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .05-.07 TO 23.0-25.0 HZ. 89005-S2596-92118.03 111872.0919-QP92A005

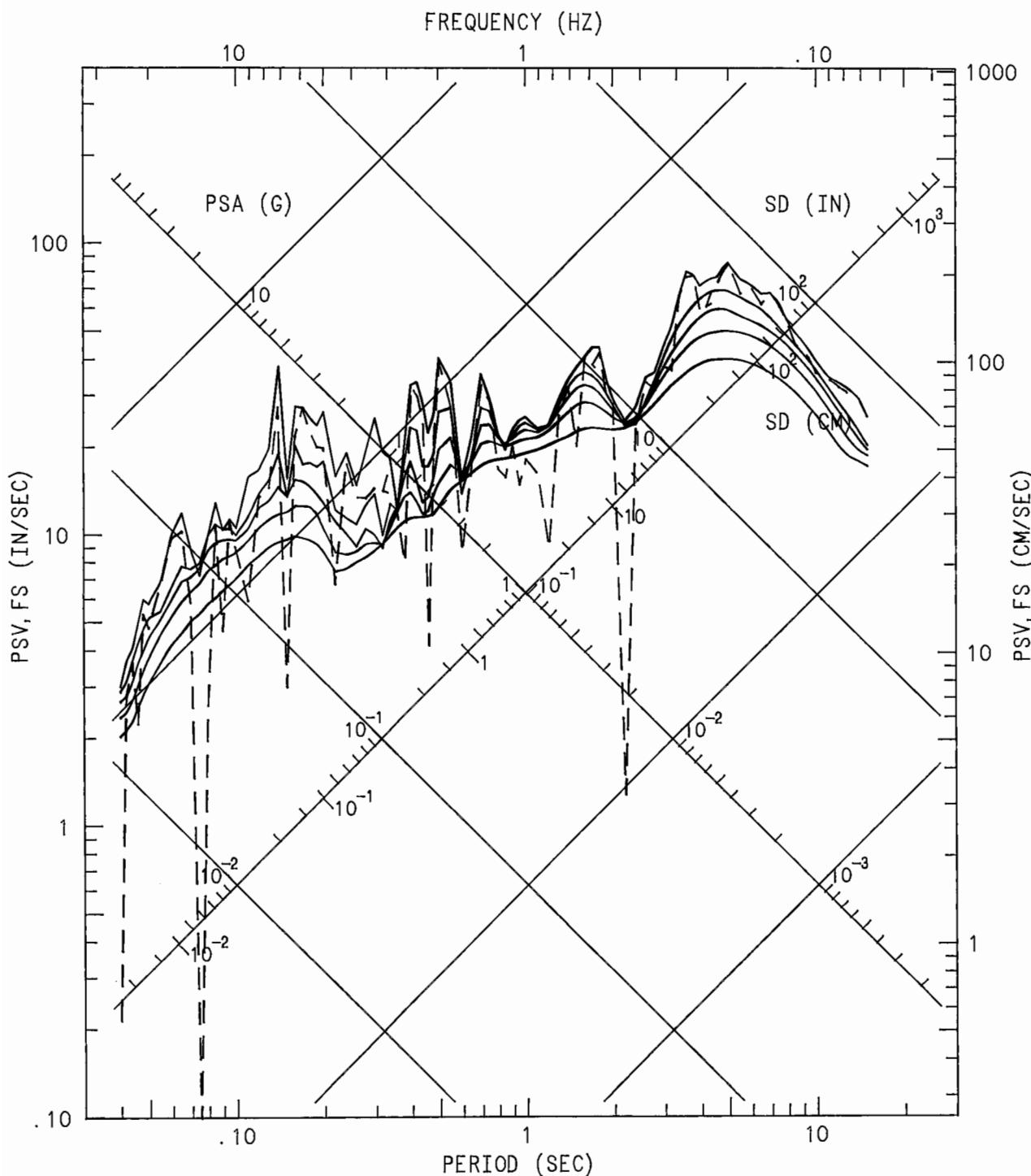


CAPE MENDOCINO EQ. (PRELIM. PROCESS.) APRIL 25, 1992 11:06 PDT
 CAPE MENDOCINO
 CHN 1: 90 DEG
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 89005-S2596-92118.03 111972.0942-QP92A005



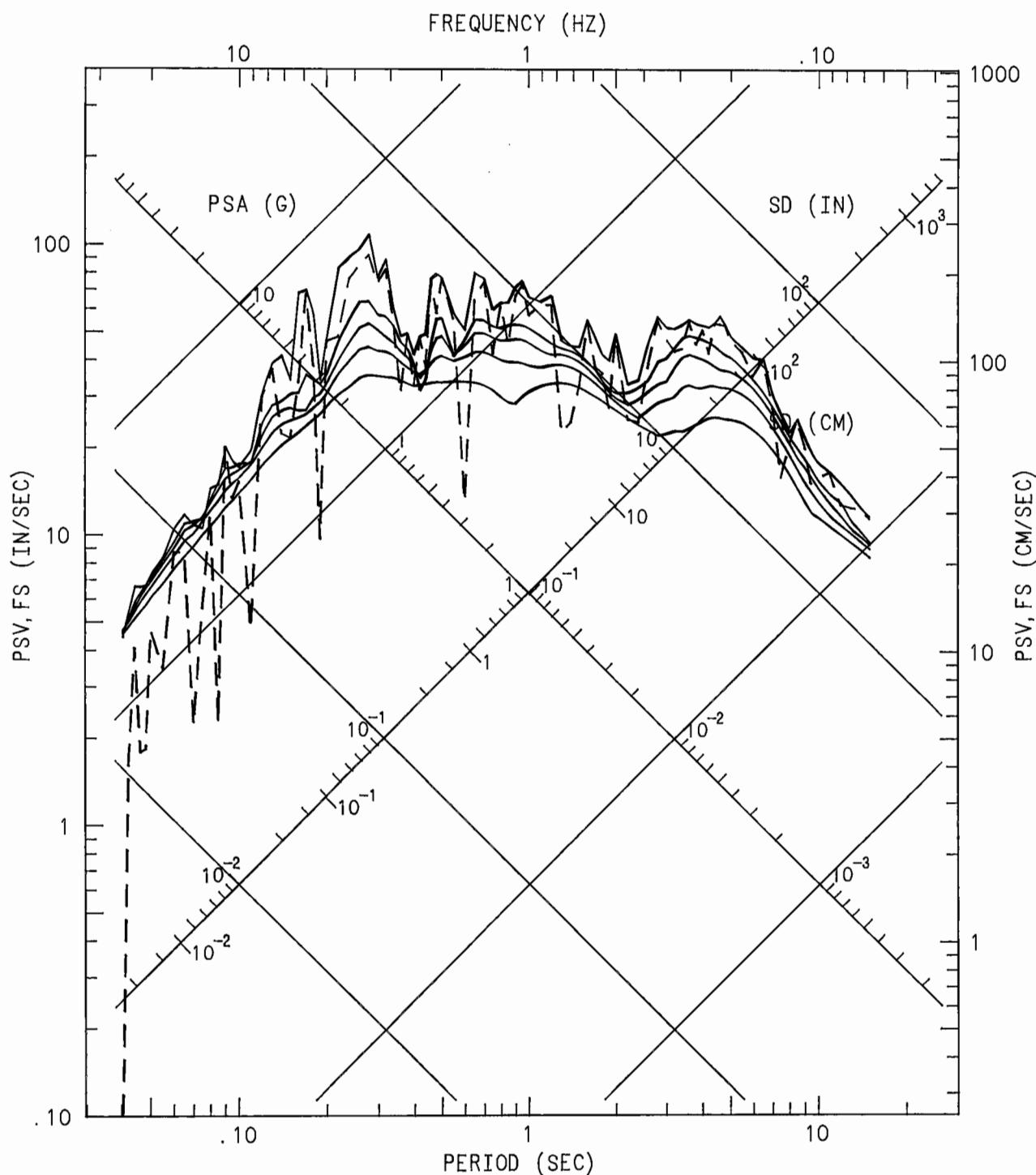
CAPE MENDOCINO EQ. (PRELIM. PROCESS.) APRIL 25, 1992 11:06 PDT
 CAPE MENDOCINO
 CHN 2: UP
 ACCELEROGRAF BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 Hz.
 89005-S2596-92118.03 111972.0942-QP92A005

— RESPONSE SPECTRA: PSV, PSA & SD — — FOURIER AMPLITUDE SPECTRUM: FS
 DAMPING VALUES: 0, 2, 5, 10, 20%

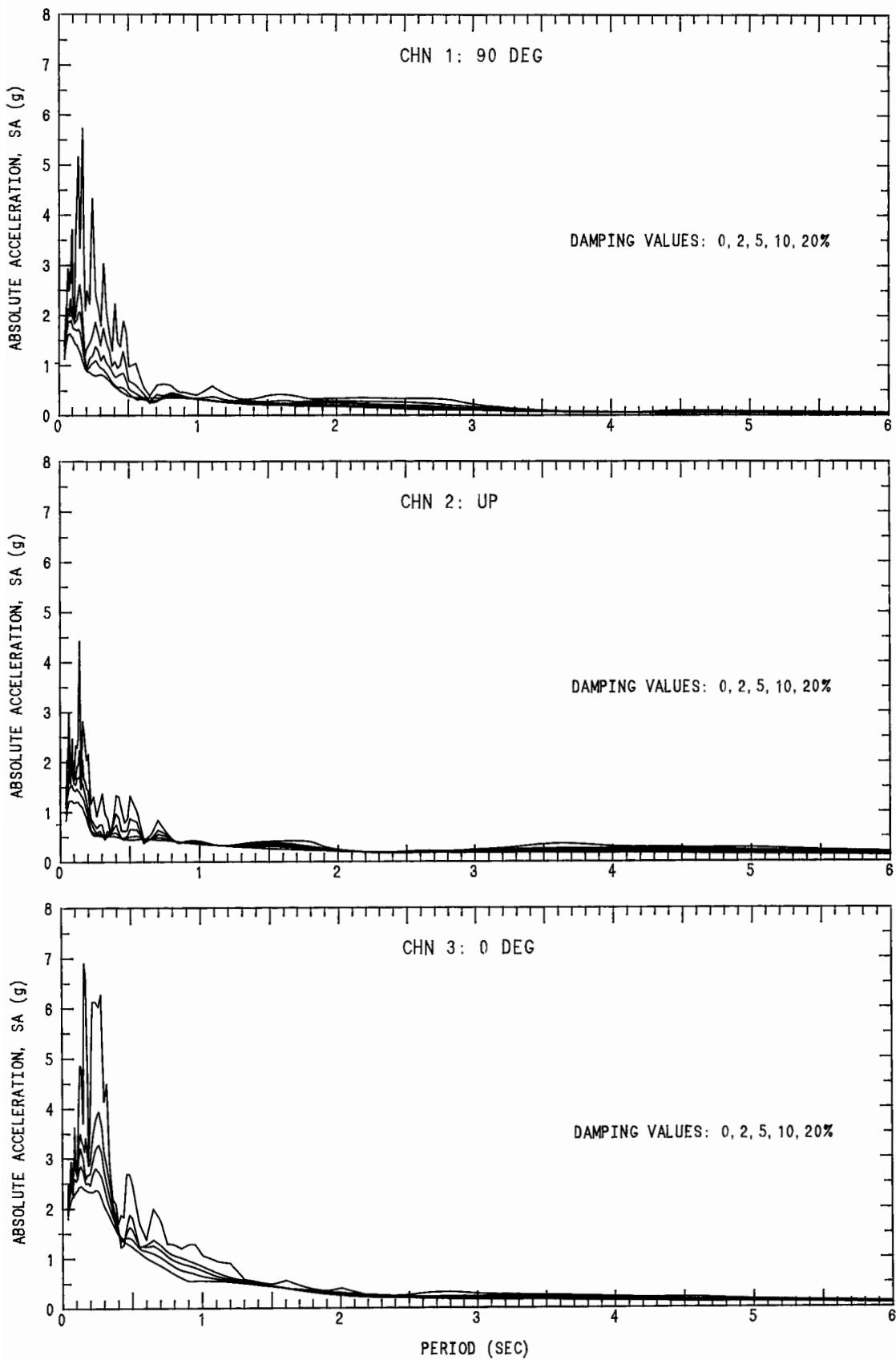


CAPE MENDOCINO EQ. (PRELIM. PROCESS.) APRIL 25, 1992 11:06 PDT
 CAPE MENDOCINO
 CHN 3: 0 DEG
 ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 Hz.
 89005-S2596-92118.03 111972.0942-QP92A005

— RESPONSE SPECTRA: PSV, PSA & SD — — FOURIER AMPLITUDE SPECTRUM: FS
 DAMPING VALUES: 0, 2, 5, 10, 20%

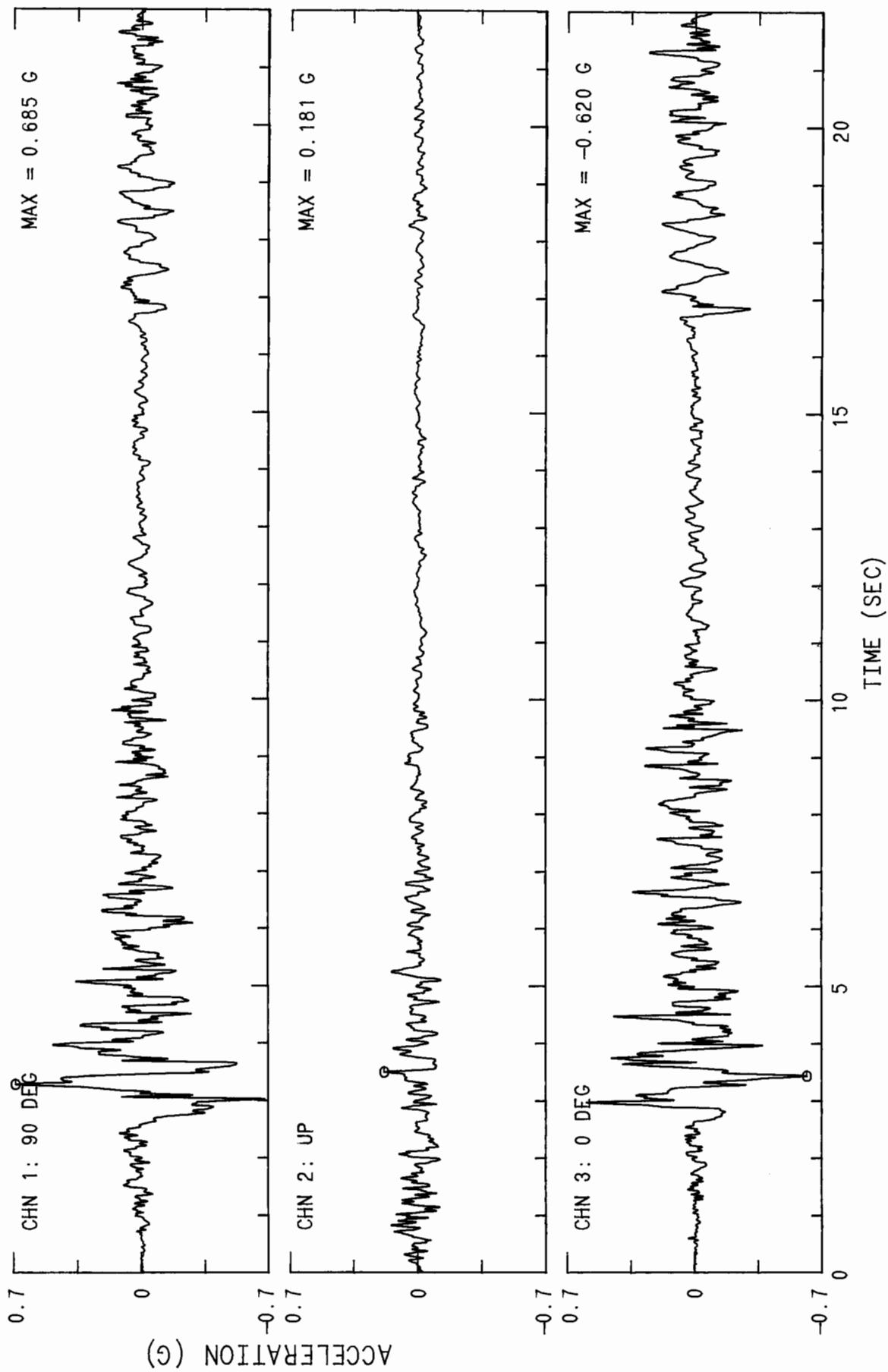


CAPE MENDOCINO EQ. (PRELIM. PROCESS.) APRIL 25, 1992 11:06 PDT
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89005-S2596-92118.03 111872.0942-QP92A005



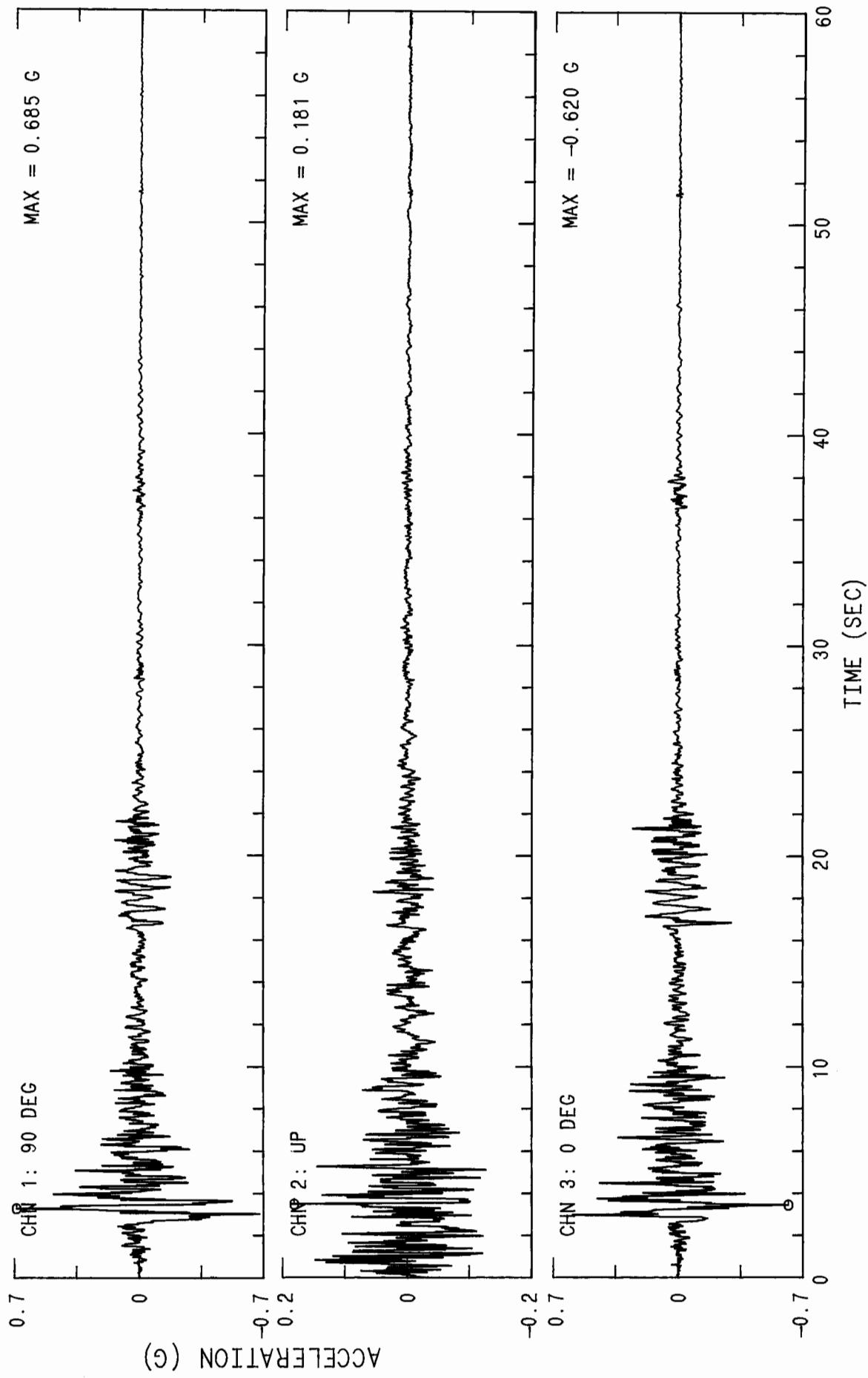
CAPE MENDOCINO EQ. (PRELIM. PROCESS.) APRIL 25, 1992 11:06 PDT
PETROLIA

UNCORRECTED ACCELERограм 89156-S2597-92118.03 111672.1543-QP92A156

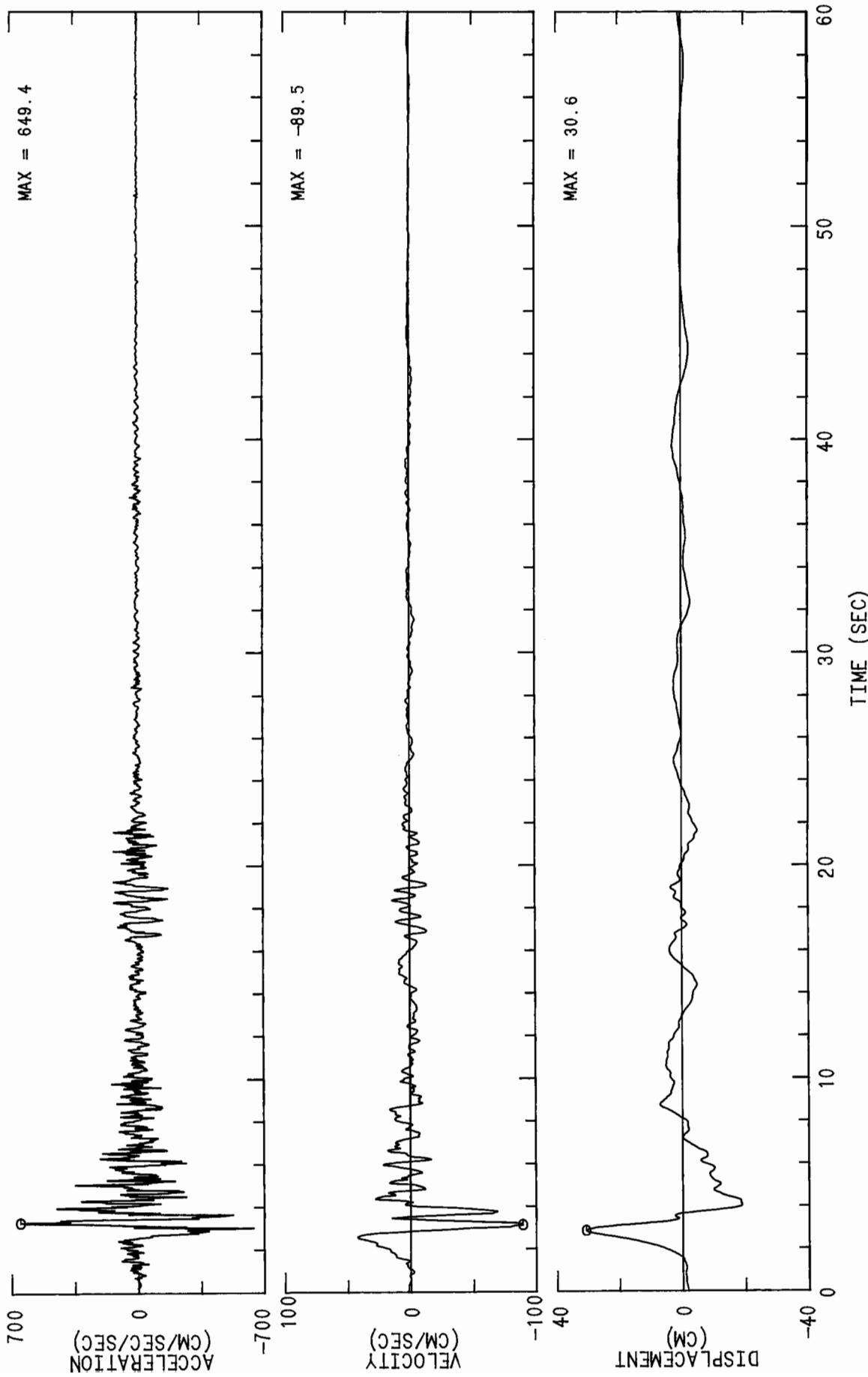


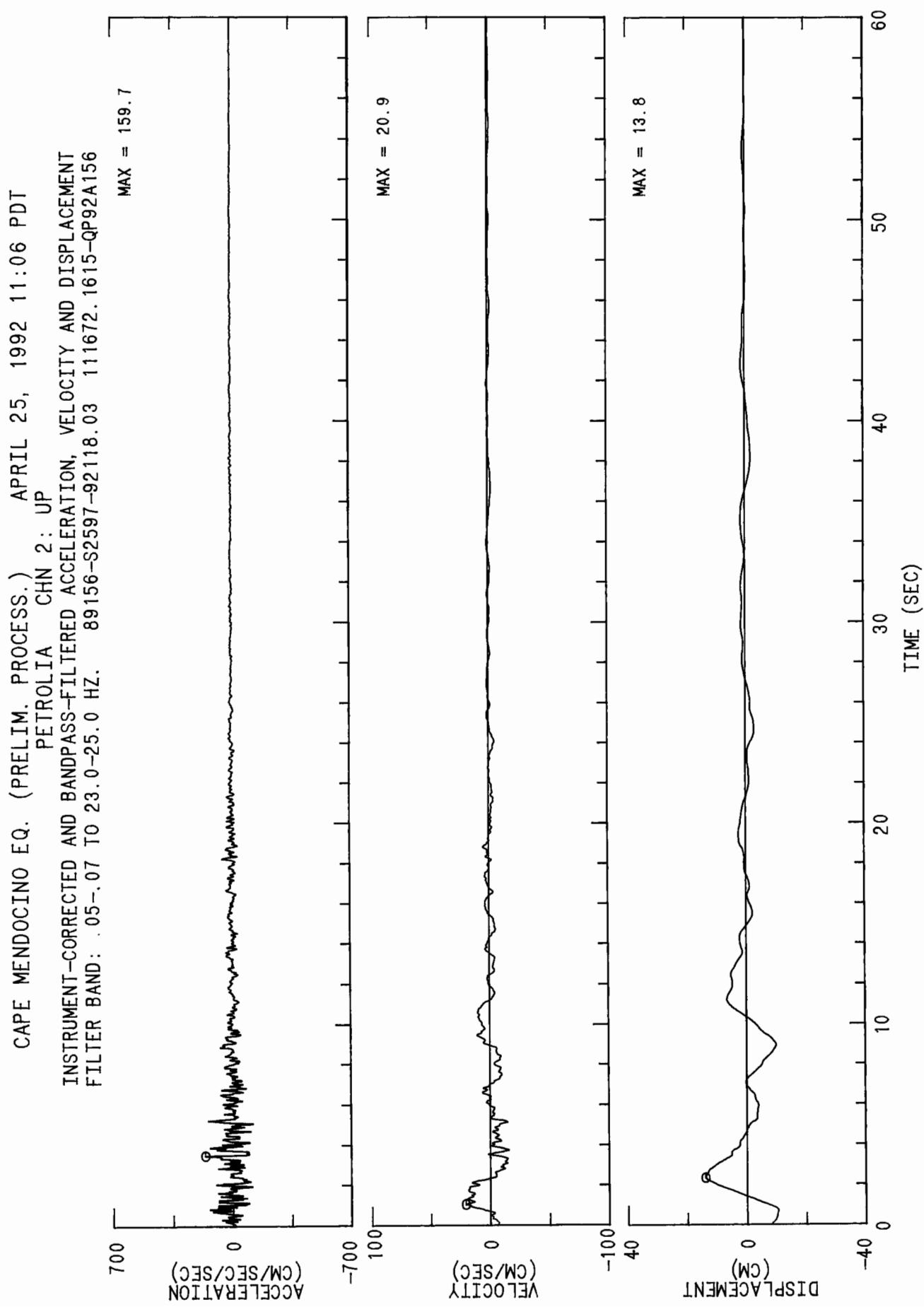
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PETROLIA

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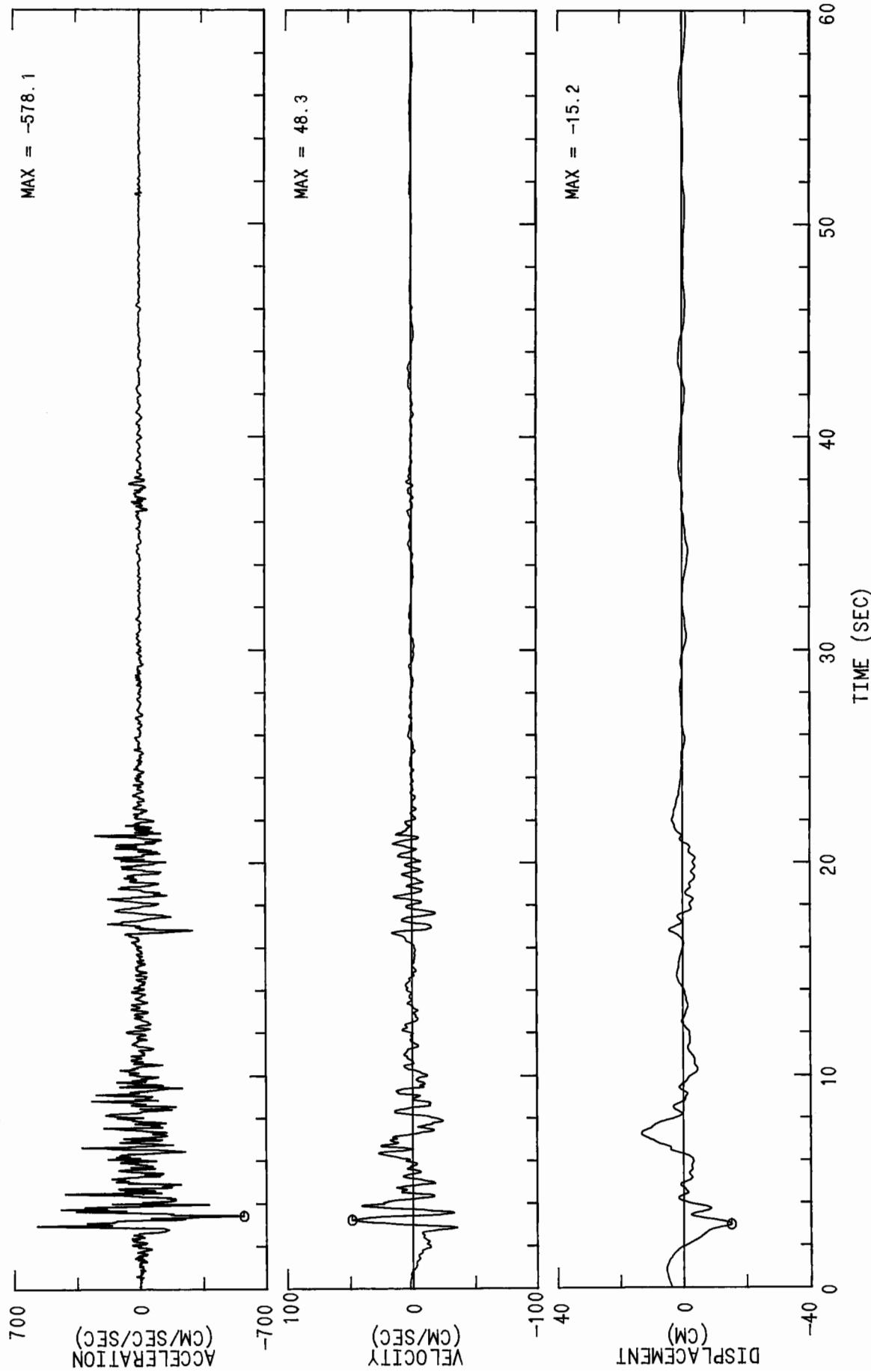


CAPE MENDOCINO EQ. (PRELIM. PROCESS.) APRIL 25, 1992 11:06 PDT
PETROLIA CHN 1: 90 DEG
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .05-.07 TO 23.0-25.0 HZ. 89156-S2597-92118.03 111672.1615-QP92A156





CAPE MENDOCINO EQ. (PRELIM. PROCESS.) APRIL 25, 1992 11:06 PDT
PETROLIA CHN 3: 0 DEG
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .05-.07 TO 23.0-25.0 HZ. 89156-S2597-92118.03 111672.1615-QP92A156

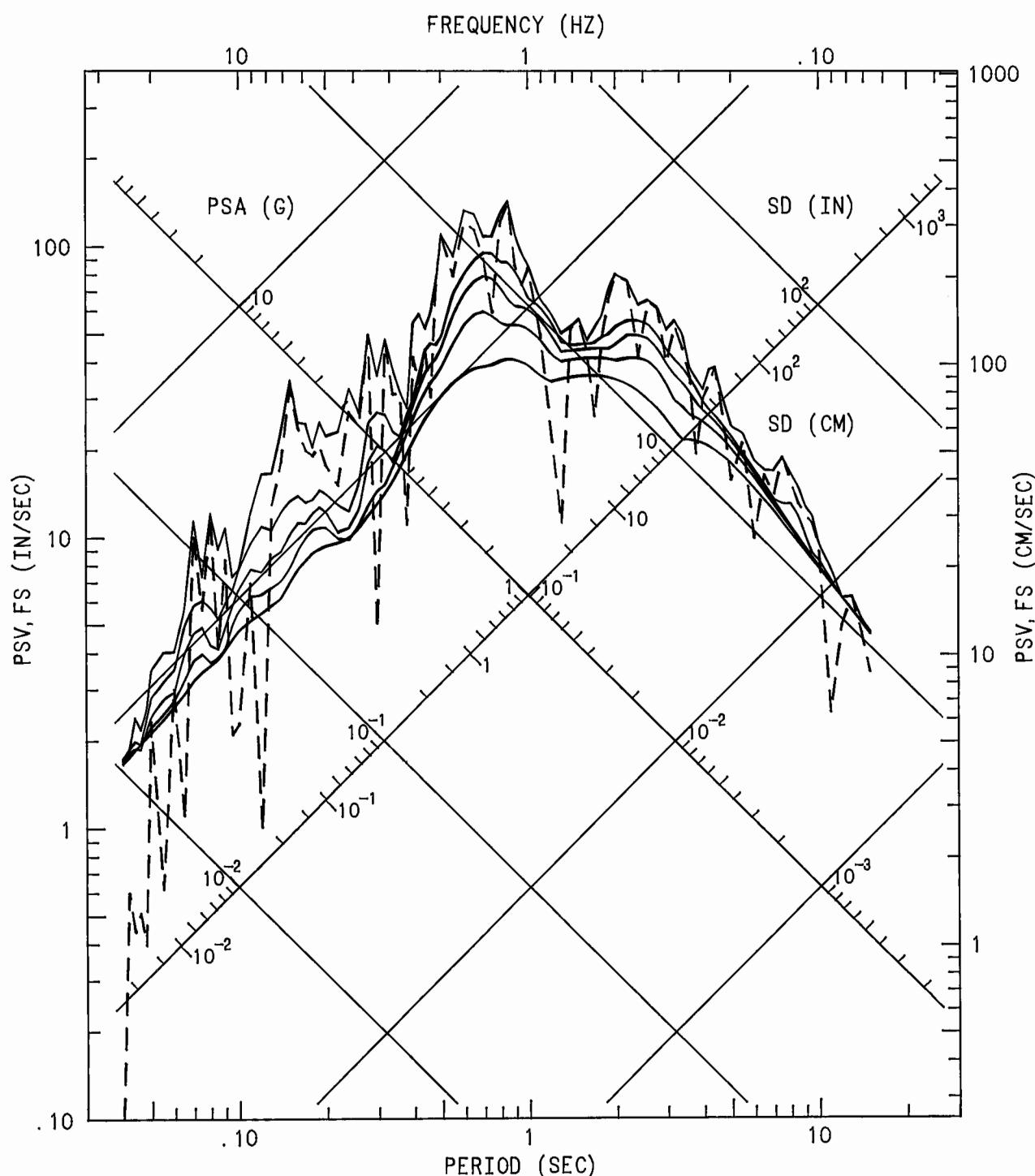


CAPE MENDOCINO EQ. (PRELIM. PROCESS.)
PETROLIA
CHN 1: 90 DEG

APRIL 25, 1992 11:06 PDT

ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 Hz.
89156-S2597-92118.03 111772.1637-QP92A156

— RESPONSE SPECTRA: PSV, PSA & SD — — FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%

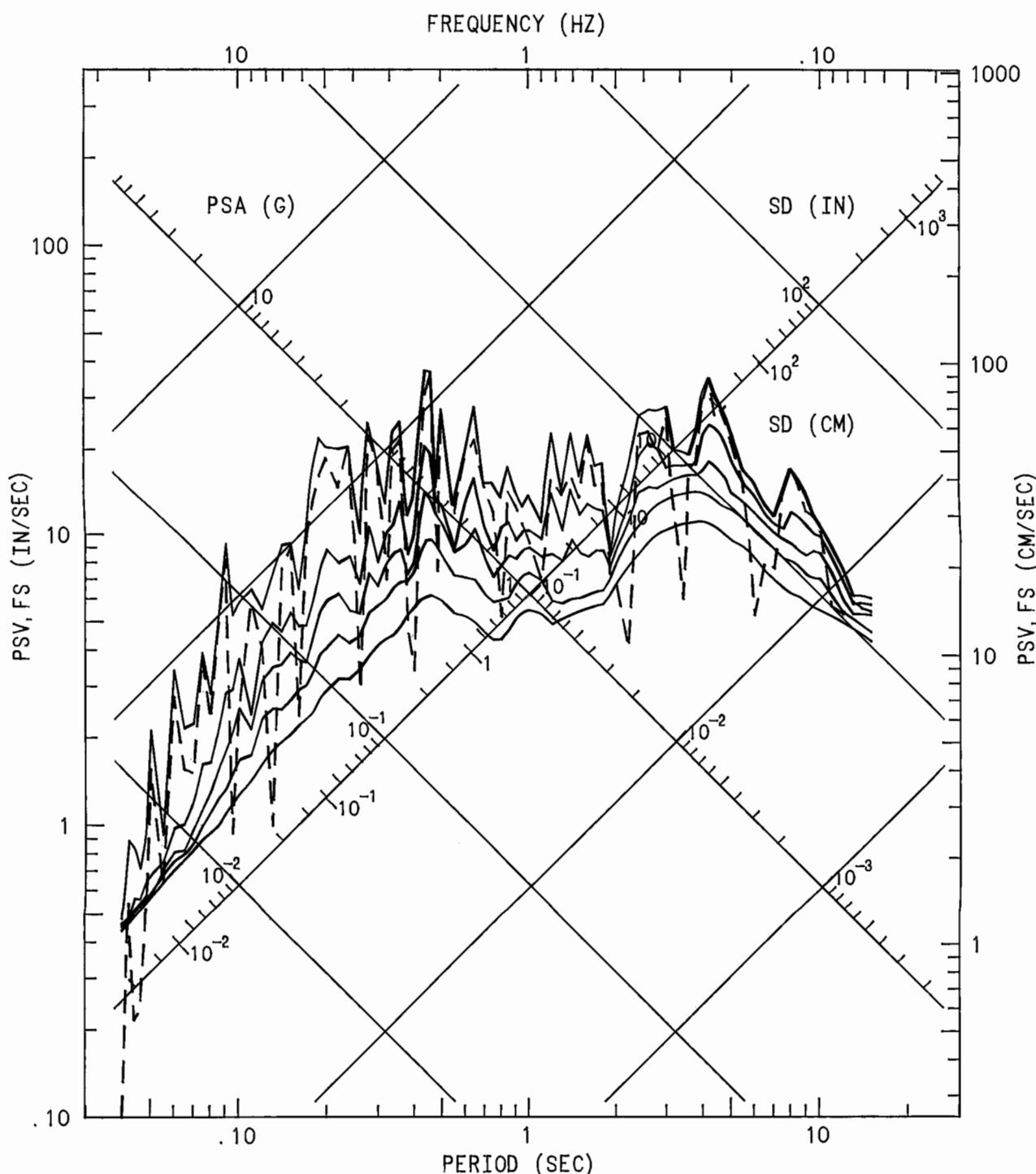


CAPE MENDOCINO EQ. (PRELIM. PROCESS.)
PETROLIA
CHN 2: UP

APRIL 25, 1992 11:06 PDT

ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 Hz.
89156-S2597-92118.03 111772.1637-QP92A156

— RESPONSE SPECTRA: PSV, PSA & SD — — FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%

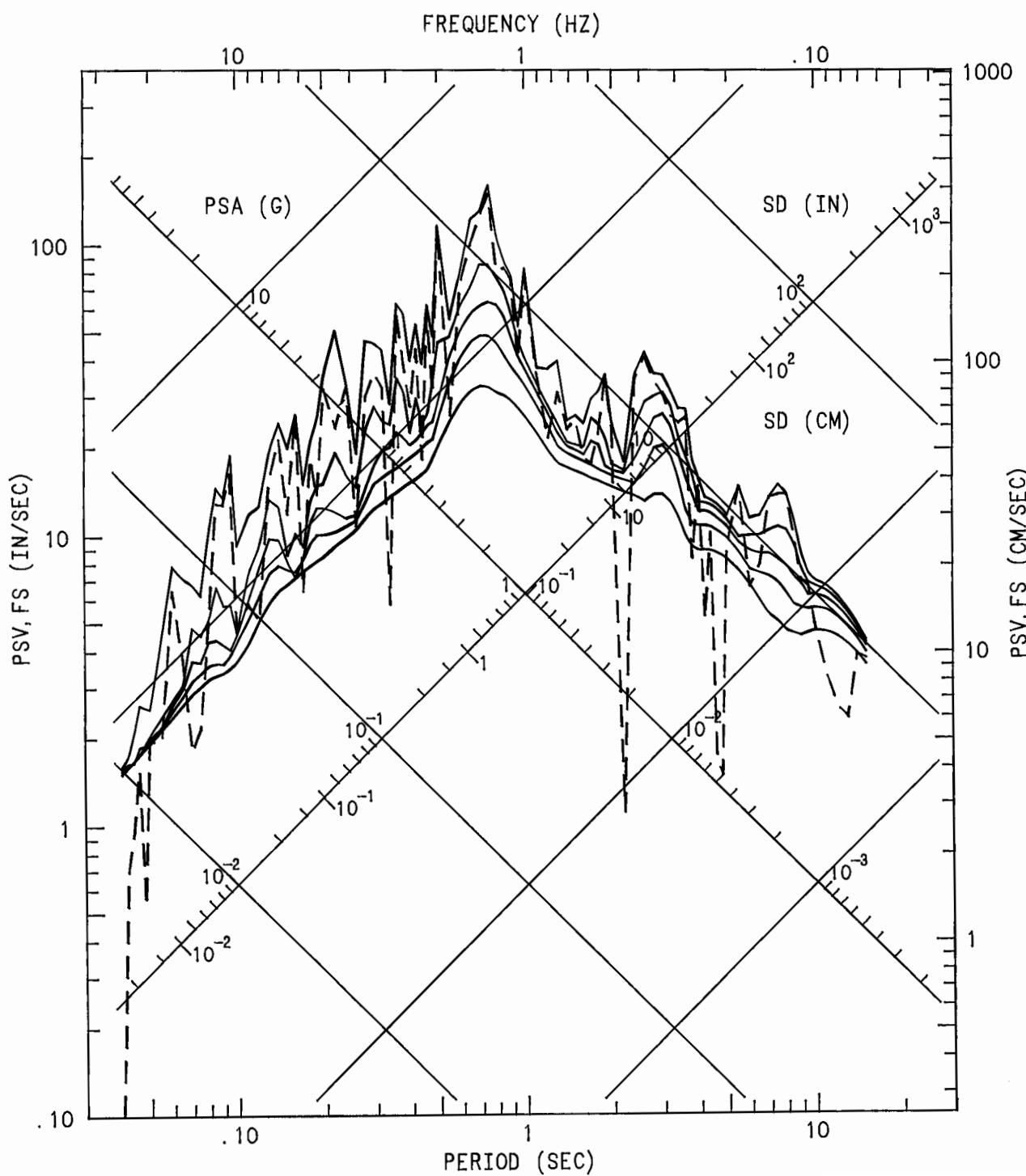


CAPE MENDOCINO EQ. (PRELIM. PROCESS.)
PETROLIA
CHN 3: 0 DEG

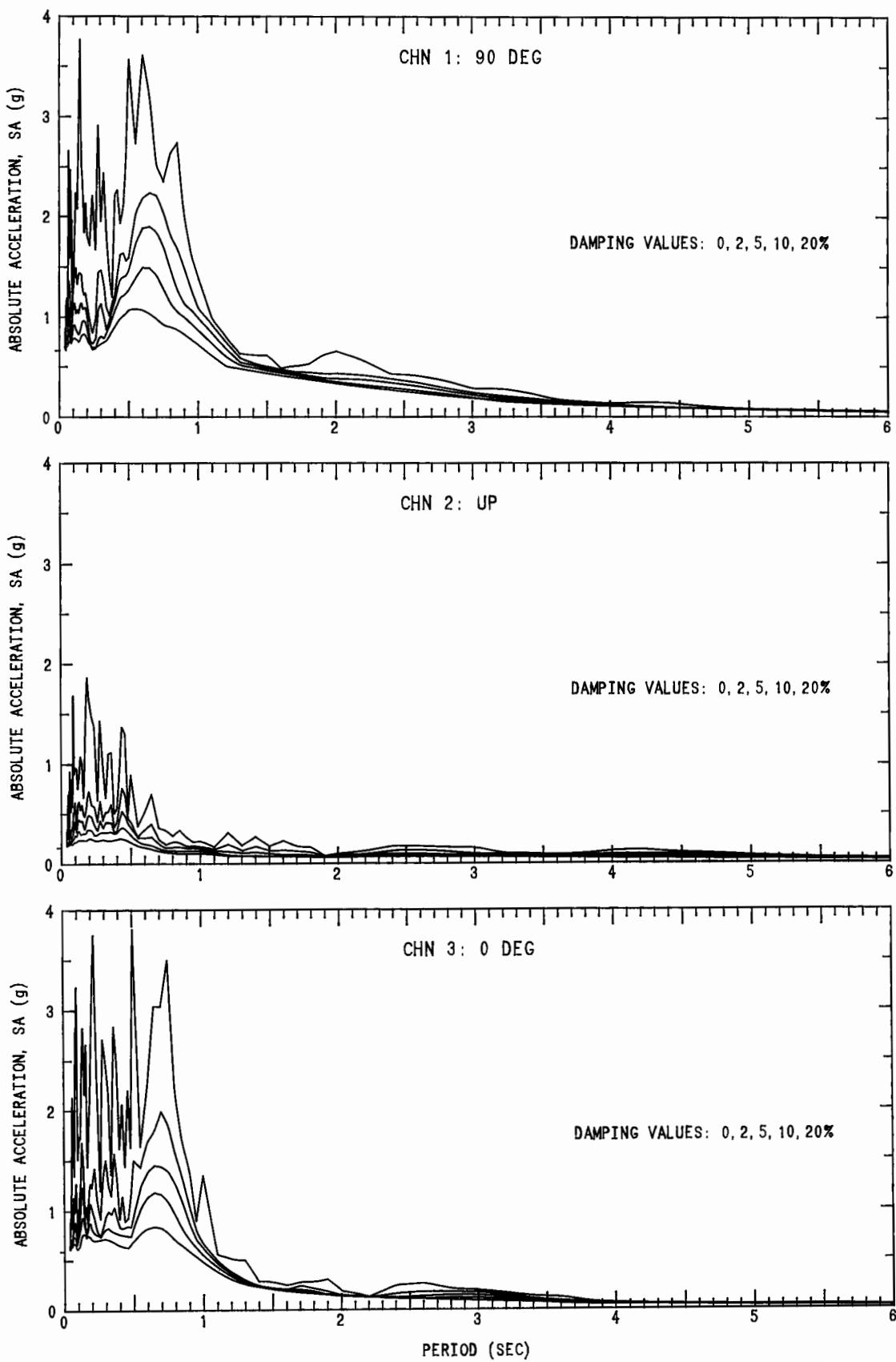
APRIL 25, 1992 11:06 PDT

ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
89156-S2597-92118.03 111772.1637-QP92A156

— RESPONSE SPECTRA: PSV, PSA & SD — — FOURIER AMPLITUDE SPECTRUM: FS
DAMPING VALUES: 0, 2, 5, 10, 20%



CAPE MENDOCINO EQ. (PRELIM. PROCESS.) APRIL 25, 1992 11:06 PDT
PETROLIA
ACCELEROMGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
89156-S2597-92118.03 111672.1637-QP92A156

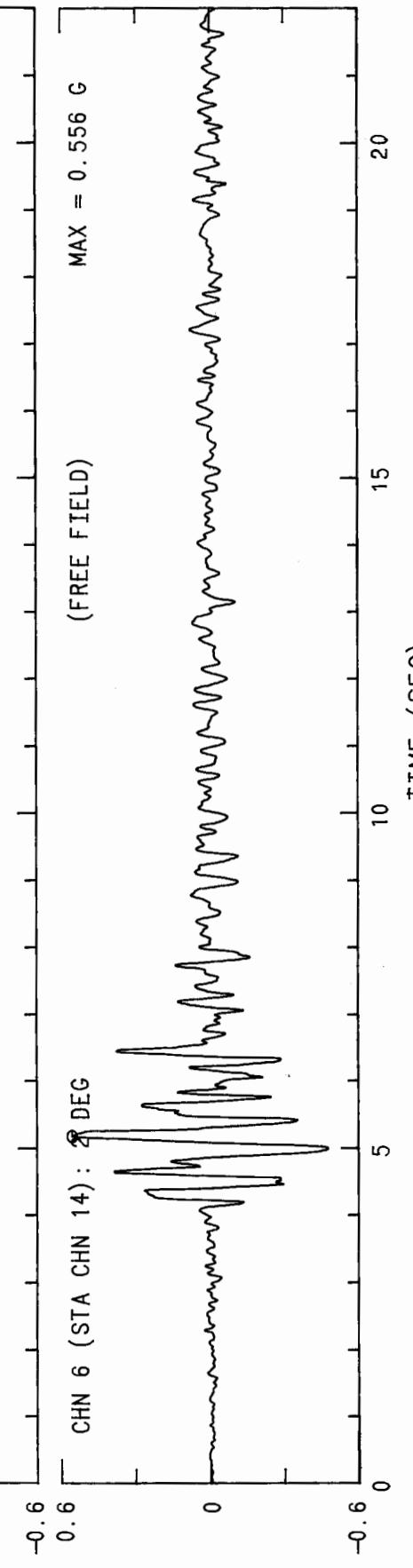
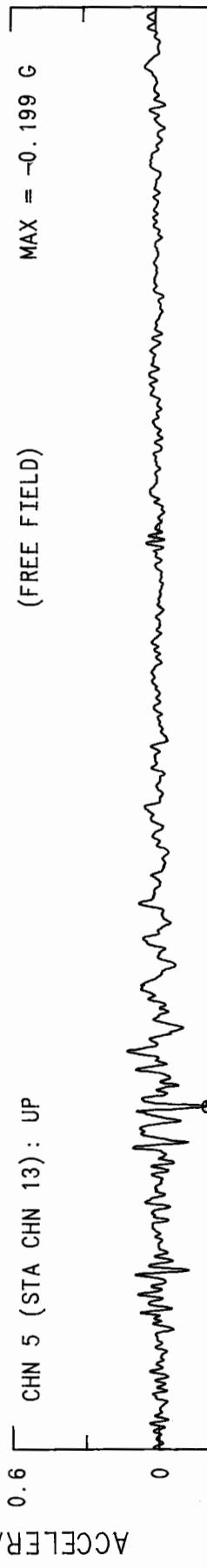


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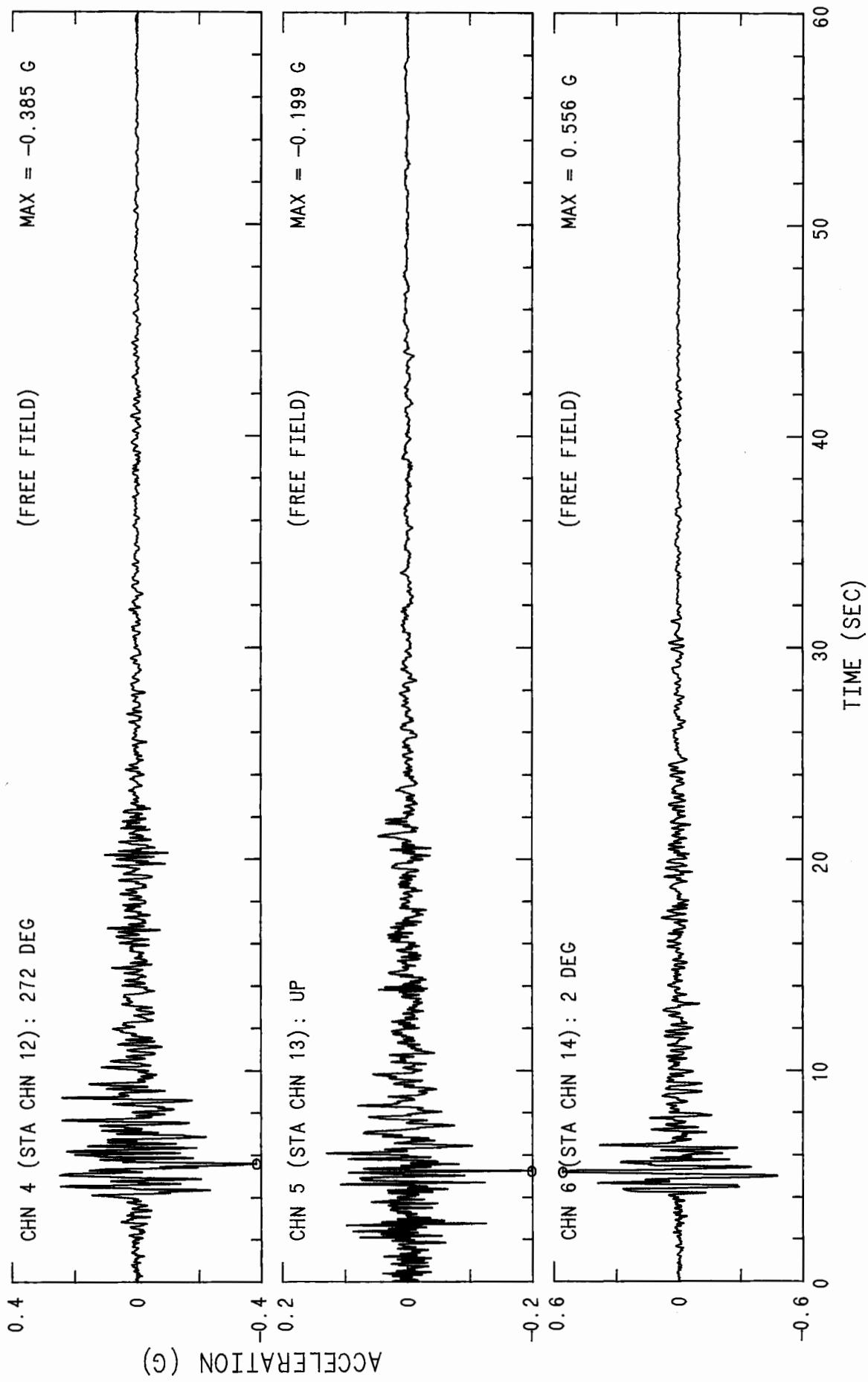
RIO DELL - 101/PINTER ST. OVERPASS

UNCORRECTED ACCELEROMETER 89324-C0138-92118.04 121472.1002-QA

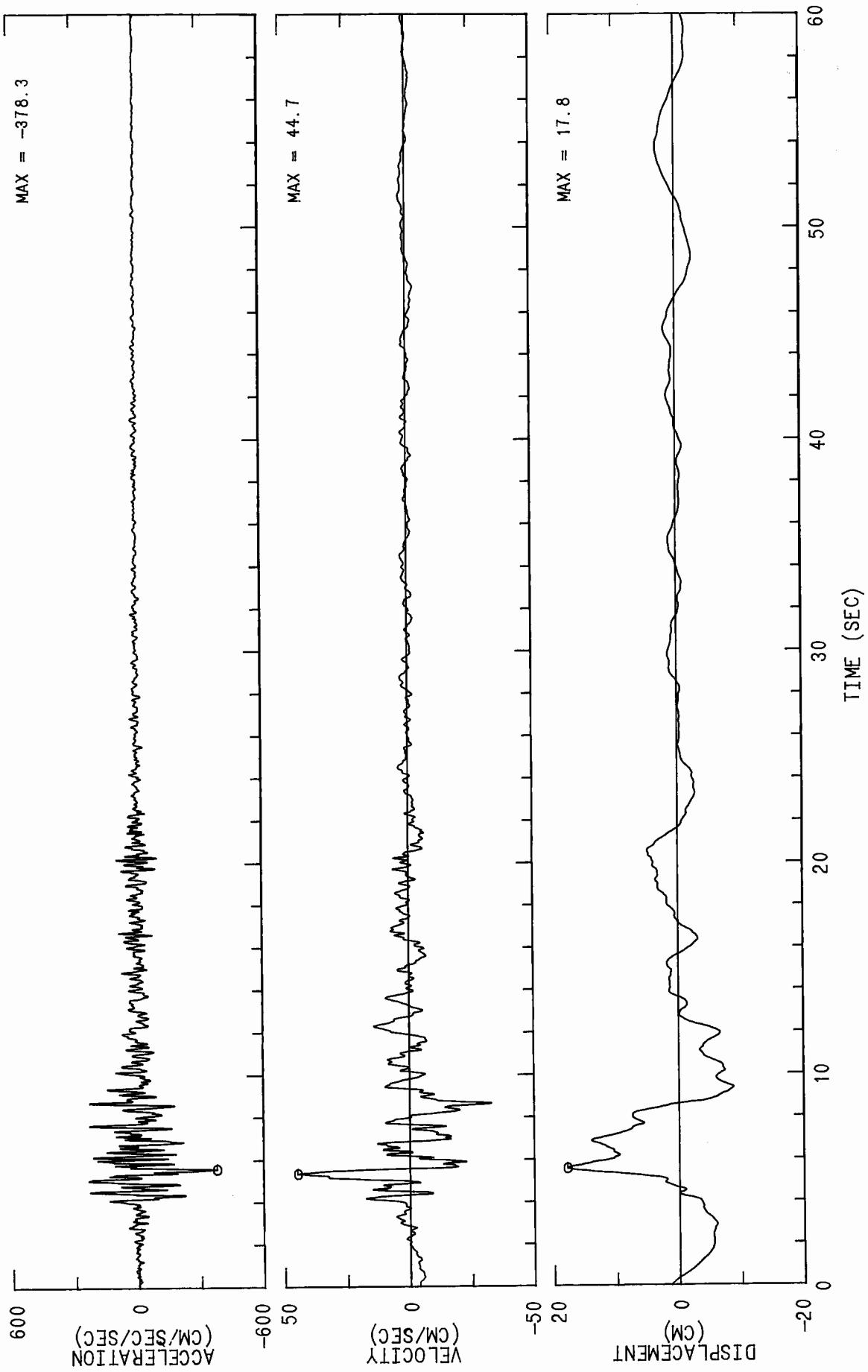
CHN 4 (STA CHN 12) : 272 DEG (FREE FIELD)



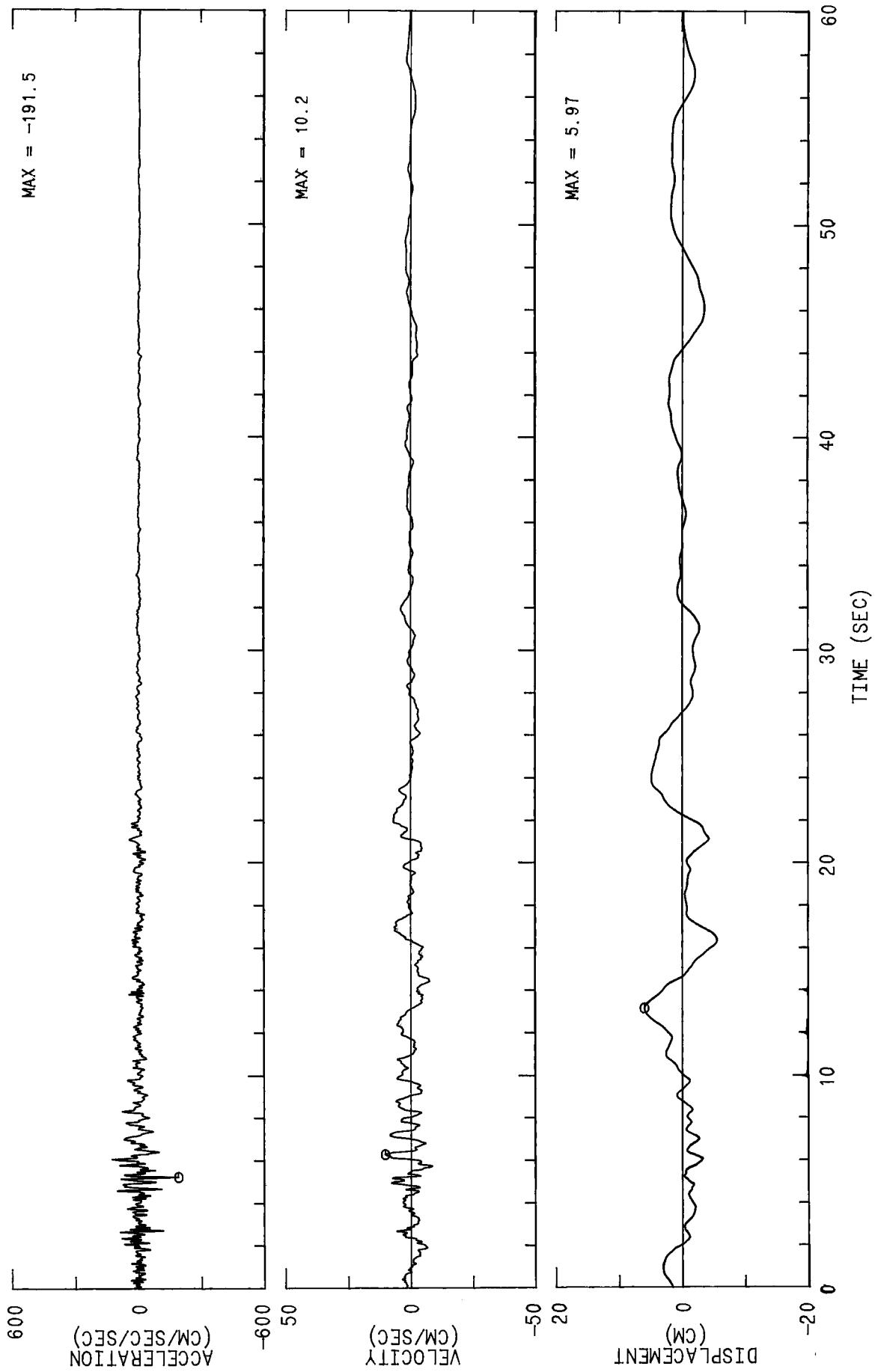
CAPE MENDOCINO EQ. (PRELIM. PROCESS.) APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PINTNER ST. OVERPASS
 UNCORRECTED ACCELEROMGRAM 89324-C0138-92118.04 121472.1002-QA



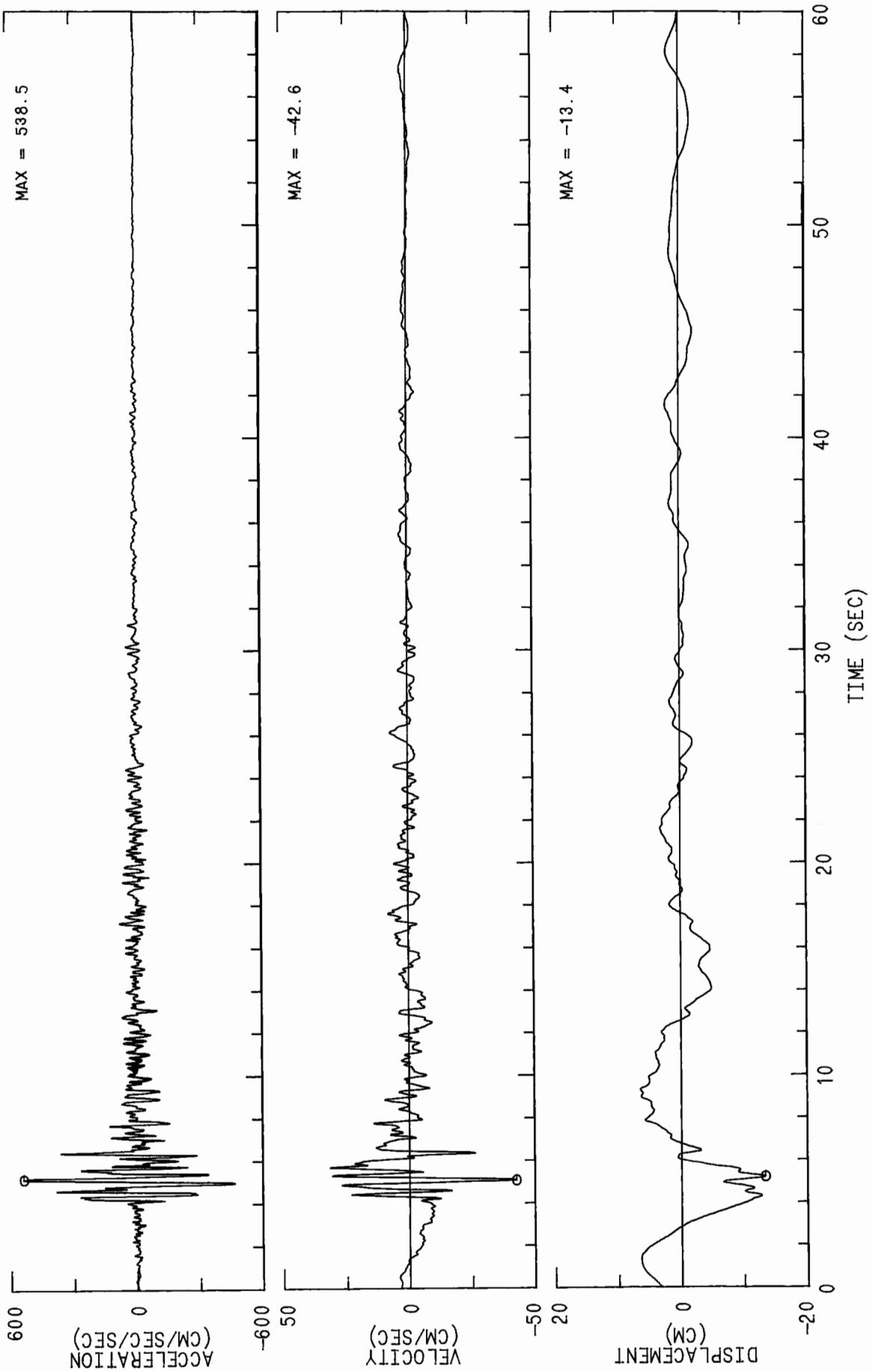
CAPE MENDOCINO EQ. (PRELIM. PROCESS.) APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS CHN 4 (STA CHN 12): 272 DEG (FREE FIELD)
 INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
 FILTER BAND: .05-.07 TO 23.0-25.0 Hz. 89324-C0138-92118.04 121472.1024-QA



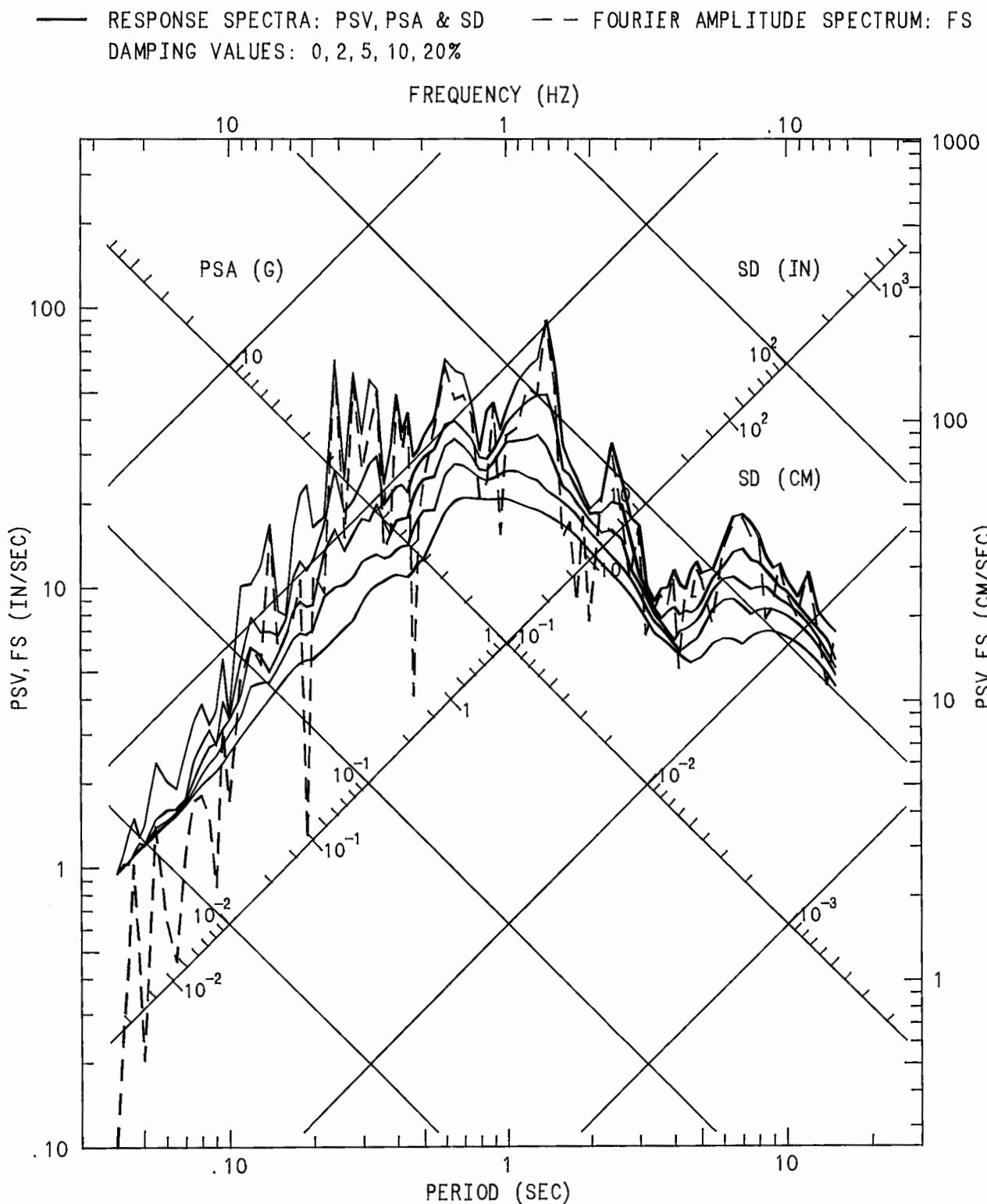
CAPE MENDOCINO EQ. (PRELIM. PROCESS.) APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PINTNER ST. OVERPASS CHN 5 (STA CHN 13) : UP (FREE FIELD)
 INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
 FILTER BAND: .05-.07 TO 23.0-25.0 HZ. 89324-C0138-92118.04 121472.1024-QA



CAPE MENDOCINO EQ. (PRELIM. PROCESS.) APRIL 25, 1992 11:06 PDT
 RIO DELLA = 101/PAINTER ST. OVERPASS CHN 6 (STA CHN 14); 2 DEG (FREE FIELD)
 INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
 FILTER BAND: .05-.07 TO 23.0-25.0 HZ. 89324-C0138-92118.04 121472.1024-QA

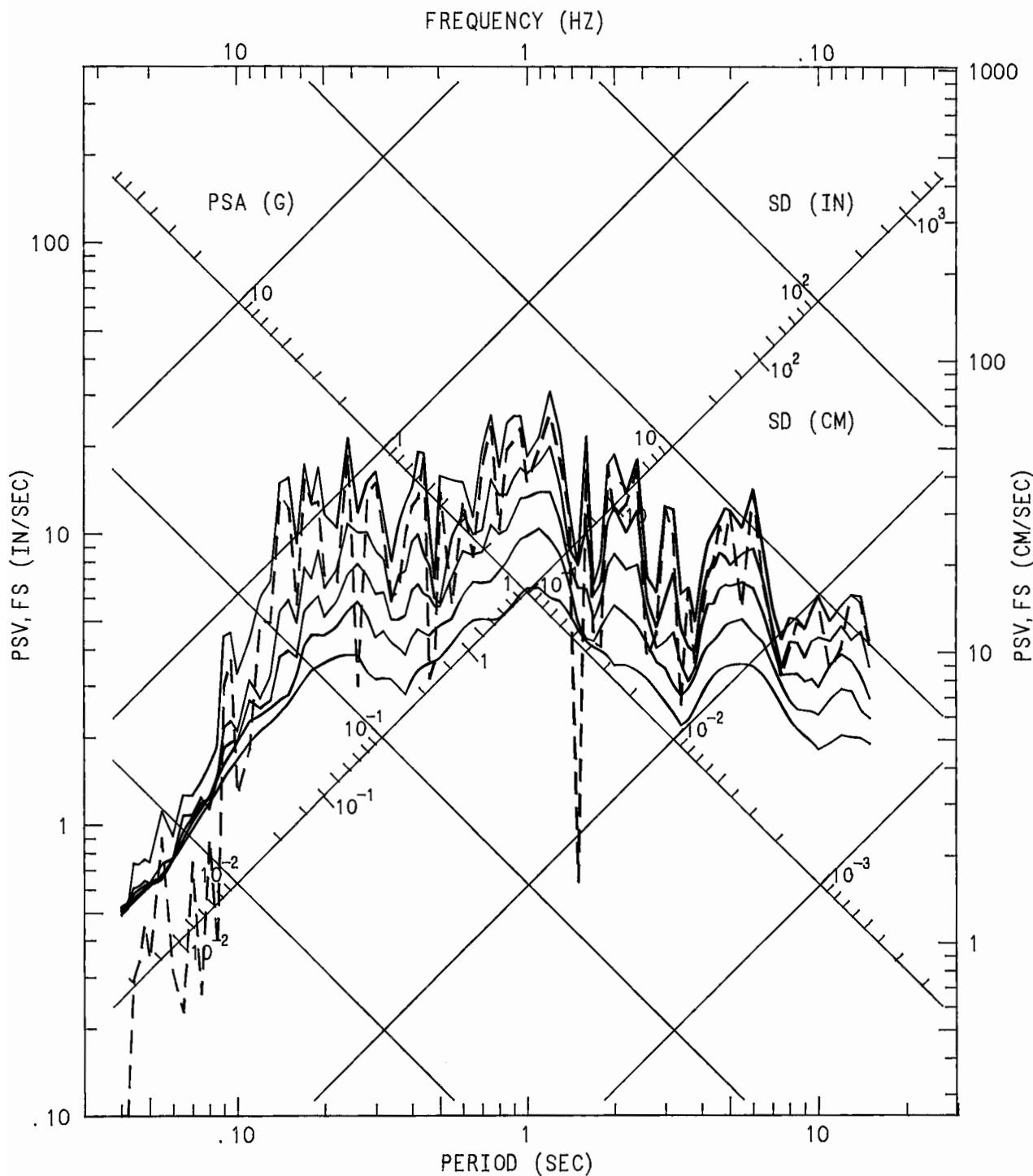


CAPE MENDOCINO EQ. (PRELIM. PROCESS.) APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS
 CHN 4 (STA CHN 12): 272 DEG (FREE FIELD)
 ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
 89324-C0138-92118.04 121572.1038-QA



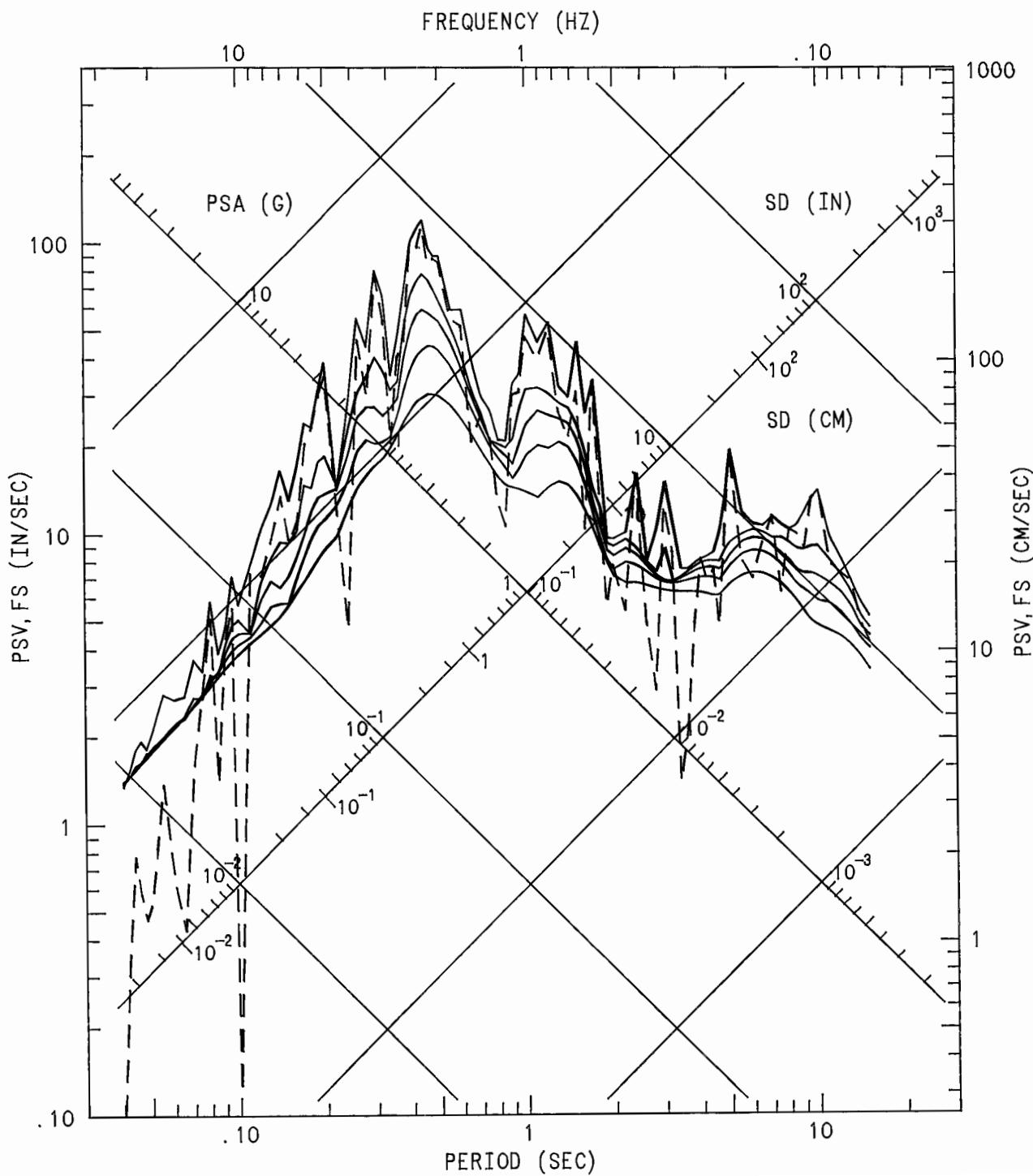
CAPE MENDOCINO EQ. (PRELIM. PROCESS.) APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS
 CHN 5 (STA CHN 13): UP (FREE FIELD)
 ACCELEROMGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 Hz.
 89324-C0138-92118.04 121572.1038-QA

— RESPONSE SPECTRA: PSV, PSA & SD — — FOURIER AMPLITUDE SPECTRUM: FS
 DAMPING VALUES: 0, 2, 5, 10, 20%

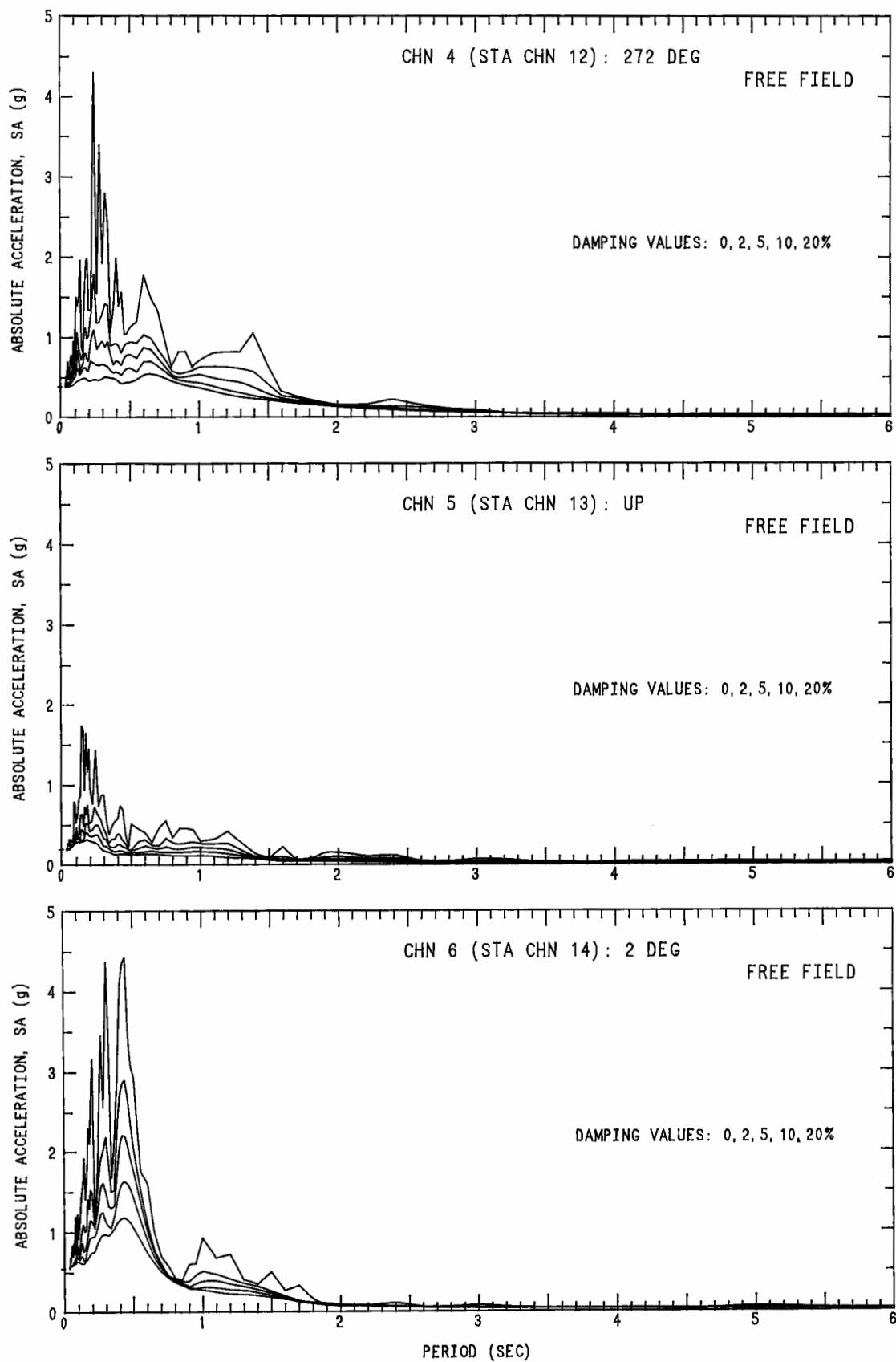


CAPE MENDOCINO EQ. (PRELIM. PROCESS.) APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS
 CHN 6 (STA CHN 14): 2 DEG (FREE FIELD)
 ACCELEROMGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 Hz.
 89324-C0138-92118.04 121572.1038-QA

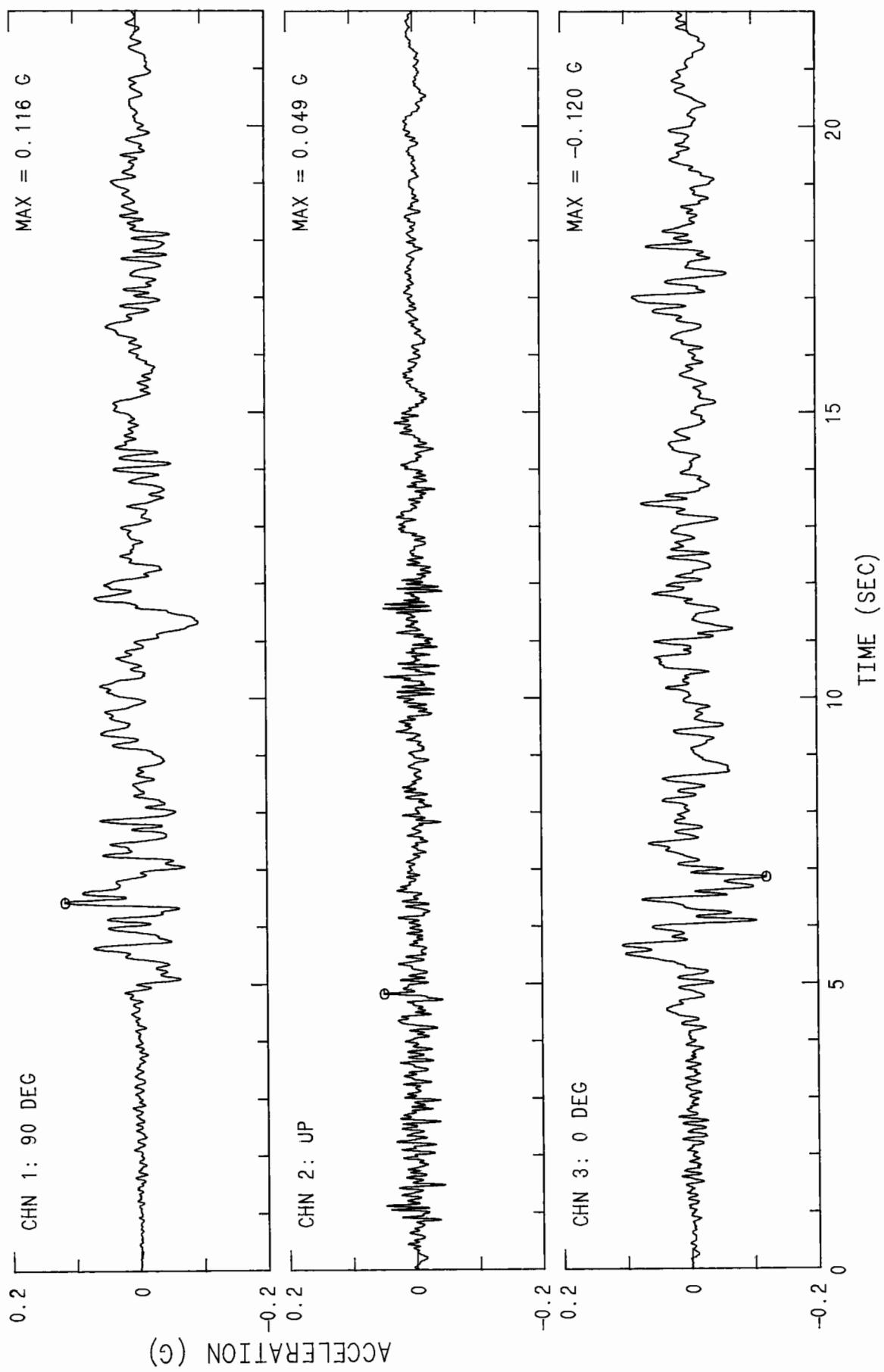
— RESPONSE SPECTRA: PSV, PSA & SD — — FOURIER AMPLITUDE SPECTRUM: FS
 DAMPING VALUES: 0, 2, 5, 10, 20%



CAPE MENDOCINO EQ. (PRELIM. PROCESS.) APRIL 25, 1992 11:06 PDT
RIO DELL - 101/PAINTER ST. OVERPASS
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
89324-C0138-92118.04 121472.1102-QA

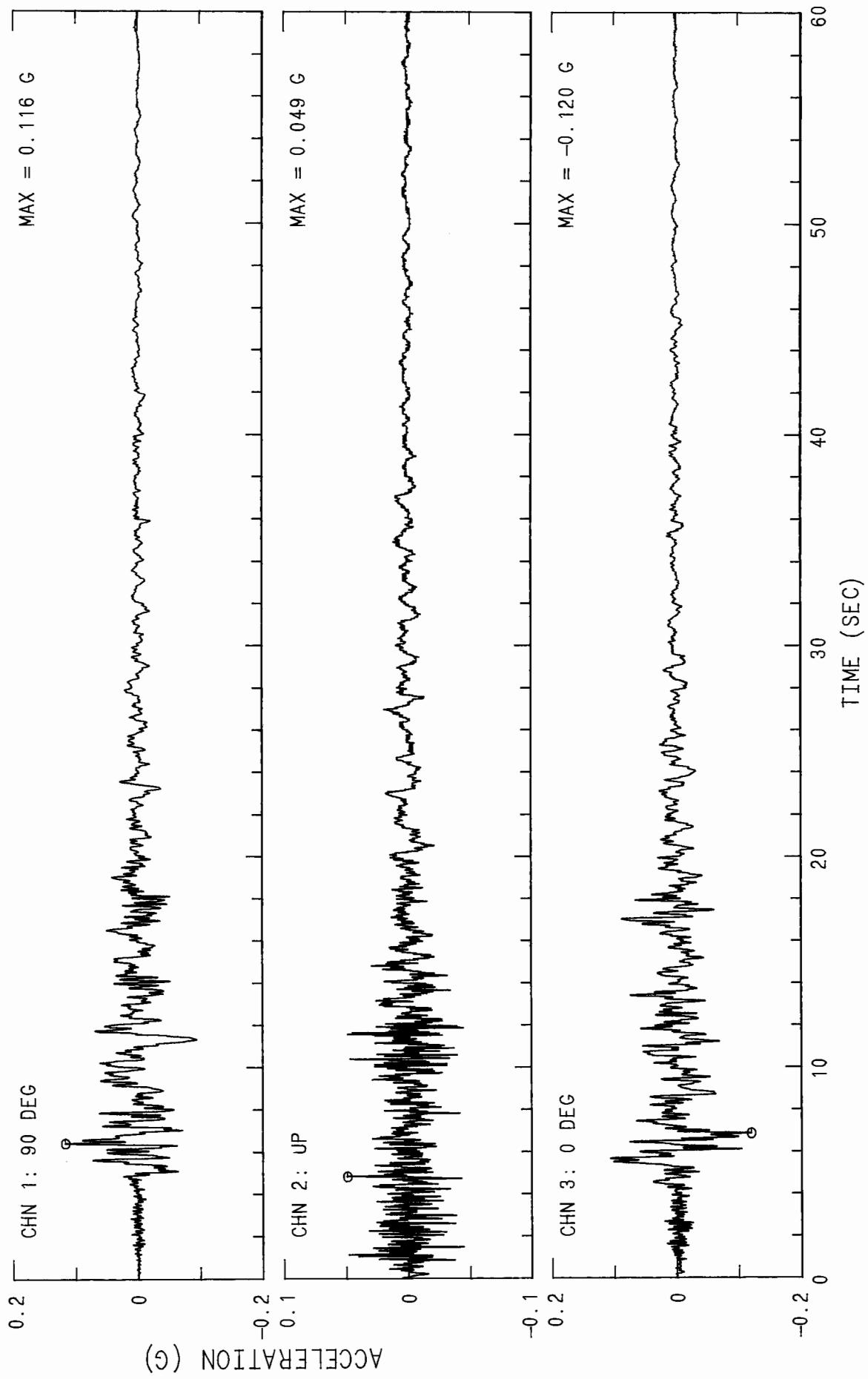


CAPE MENDOCINO EQ. (PRELIM. PROCESS.) APRIL 25, 1992 11:06 PDT
FORTUNA - 701 S. FORTUNA BLVD.
UNCORRECTED ACCELERограм 89486-S50086-92118.03 111872.1259-QP92AA486

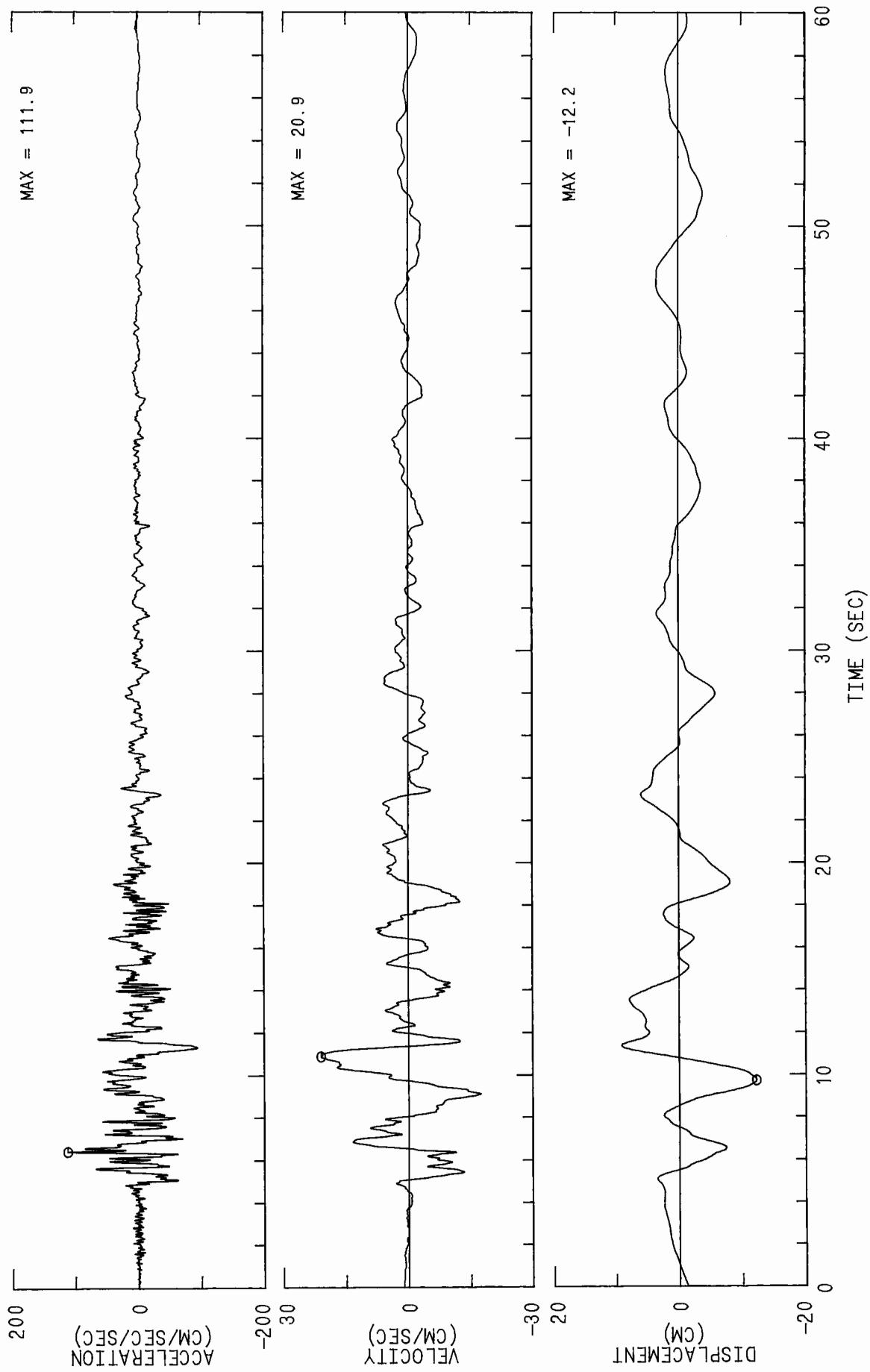


CAPE MENDOCINO EQ. (PRELIM. PROCESS.) APRIL 25, 1992 11:06 PDT
FORTUNA - 701 S. FORTUNA BLVD.

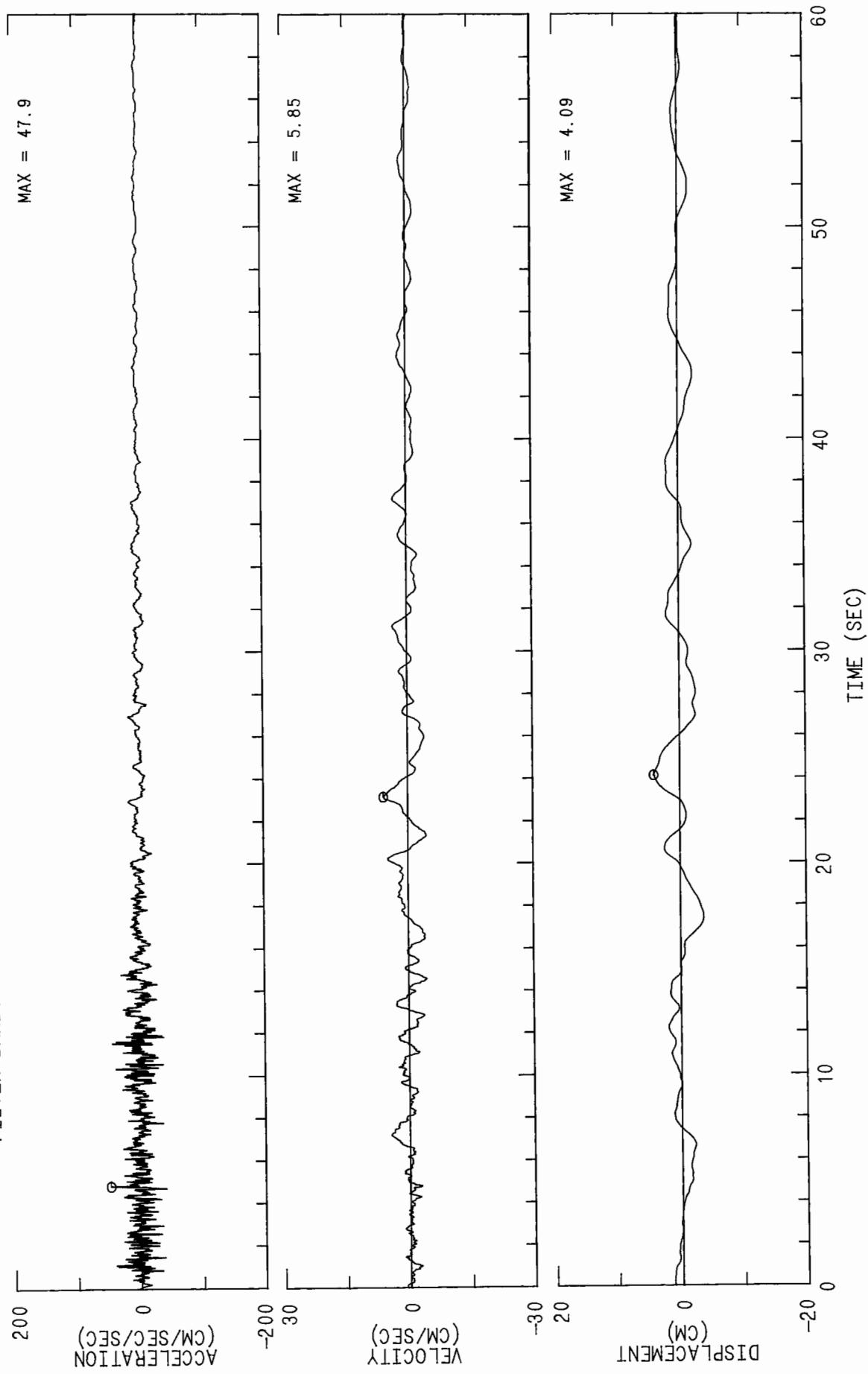
UNCORRECTED ACCELERrogram 89486-SS5086-92118.03 111872.1259-QP92A486



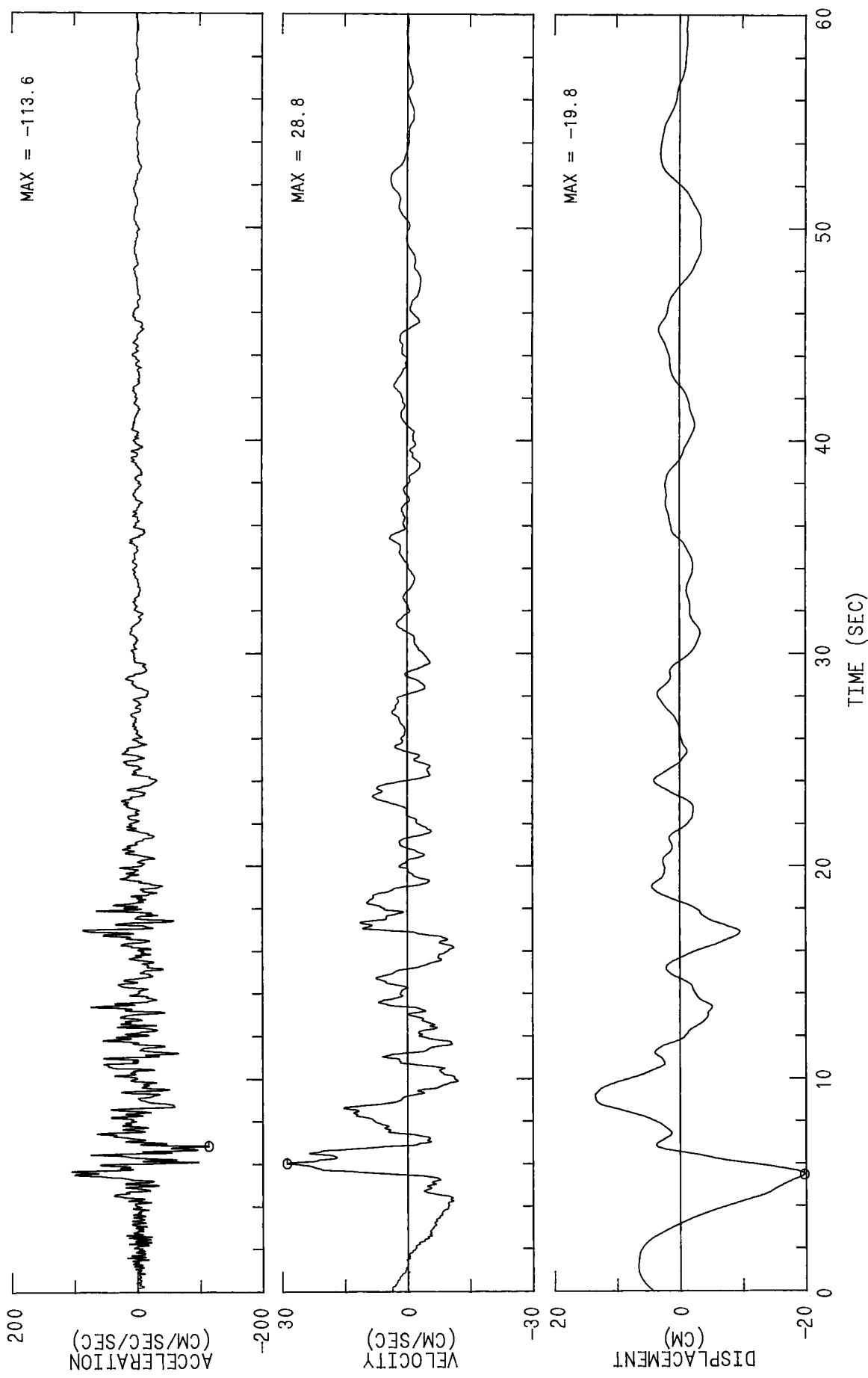
CAPE MENDOCINO EQ. (PRELIM. PROCESS.) APRIL 25, 1992 11:06 PDT
 FORTUNA - 701 S. FORTUNA BLVD. CHN 1: 90 DEG
 INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
 FILTER BAND: .05-.07 TO 23.0-25.0 HZ. 89486-S5086-92118.03 111872.1331-QP92A486



CAPE MENDOCINO EQ. (PRELIM. PROCESS.) APRIL 25, 1992 11:06 PDT
FORTUNA - 701 S. FORTUNA BLVD. CHN 2: UP
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .05-.07 TO 23.0-25.0 HZ. 89486-S5086-92118.03 111872.1331-QP92A486

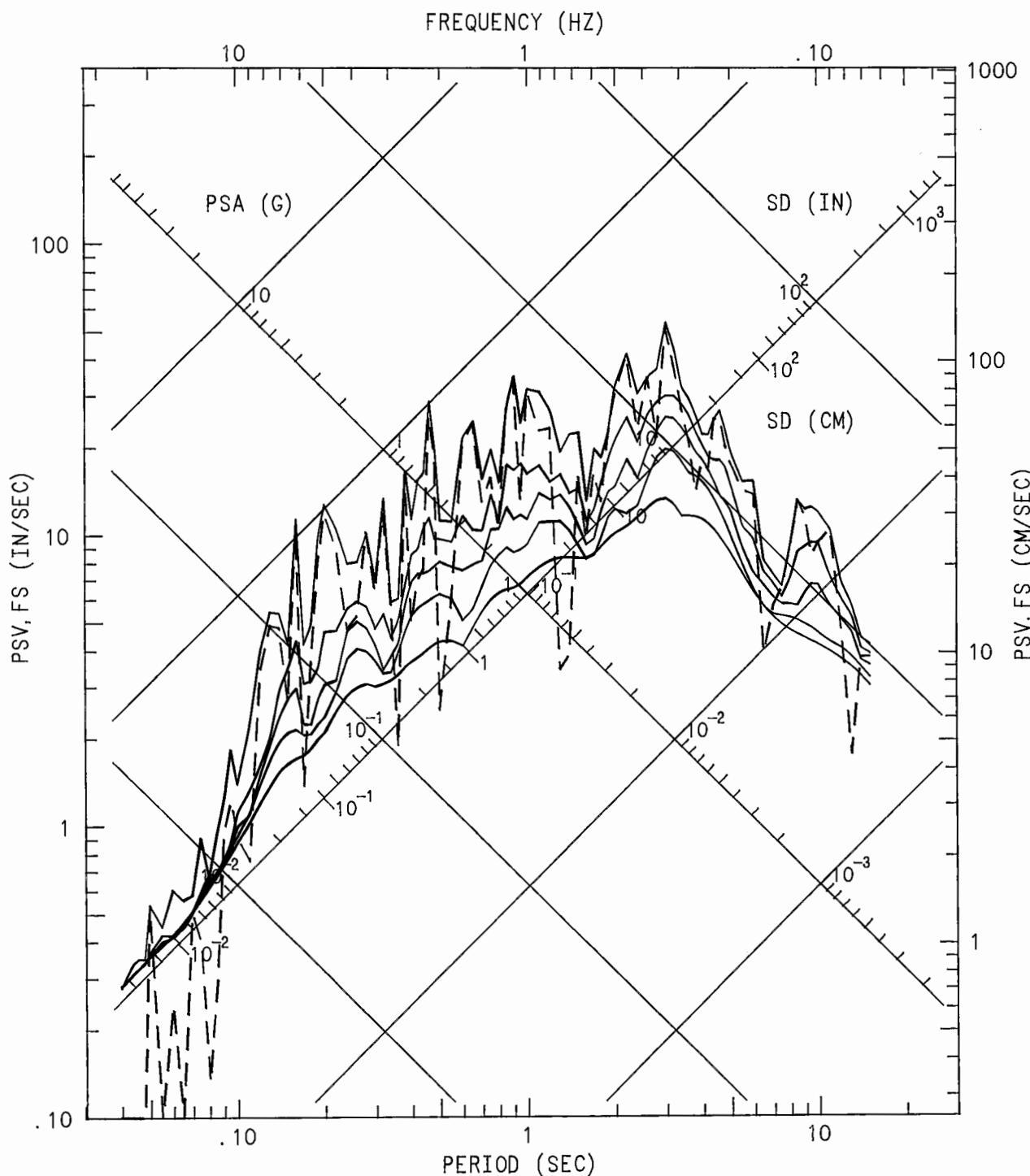


CAPE MENDOCINO EQ. (PRELIM. PROCESS.) APRIL 25, 1992 11:06 PDT
FORTUNA - 701 S. FORTUNA BLVD. CHN 3: 0 DEG
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .05-.07 TO 23.0-25.0 HZ. 89486-S5086-92118.03 111872.1331-QP92A486



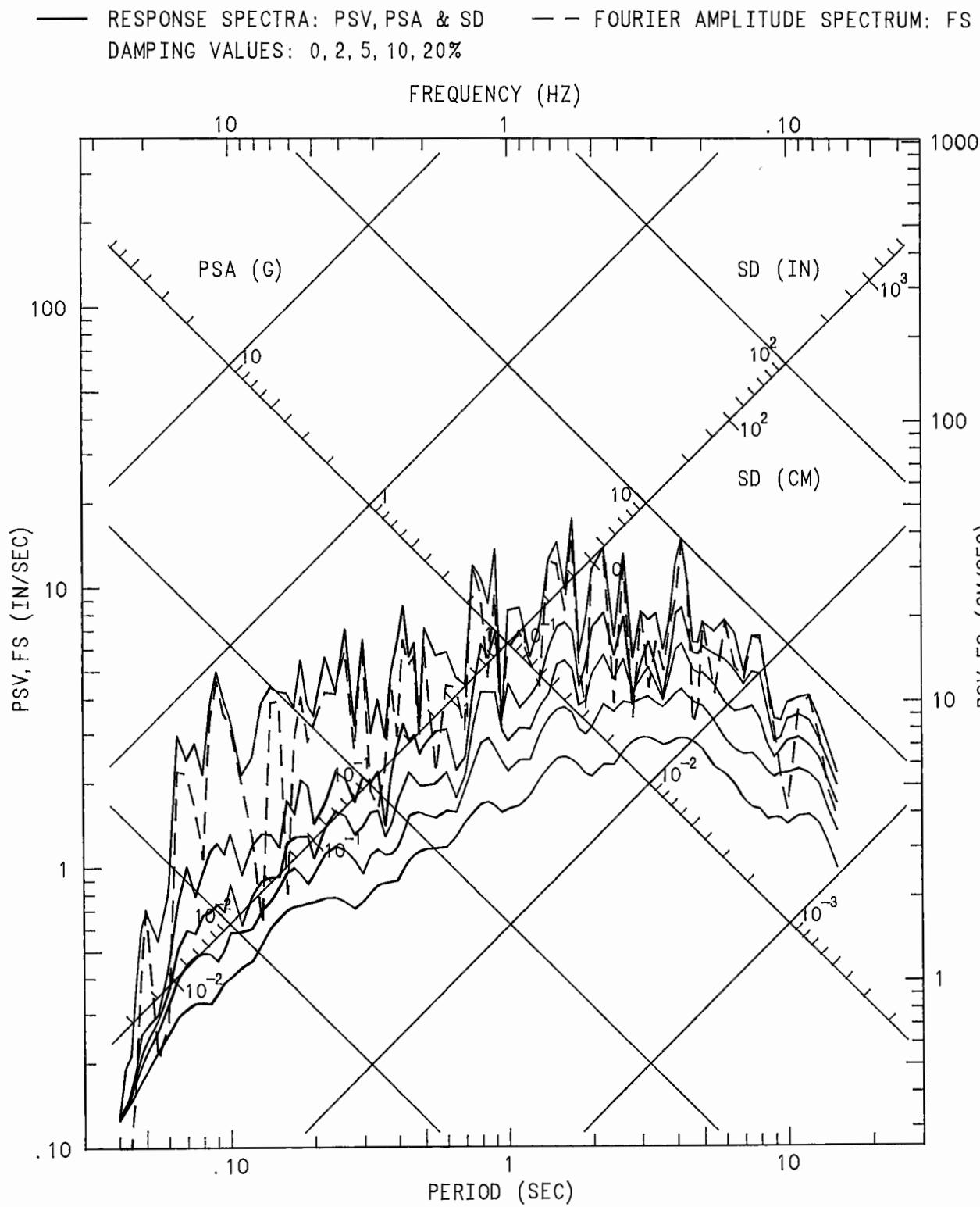
CAPE MENDOCINO EQ. (PRELIM. PROCESS.) APRIL 25, 1992 11:06 PDT
 FORTUNA - 701 S. FORTUNA BLVD.
 CHN 1: 90 DEG
 ACCELEROMGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 HZ.
 89486-S5086-92118.03 111972.1353-QP92A486

— RESPONSE SPECTRA: PSV, PSA & SD — — FOURIER AMPLITUDE SPECTRUM: FS
 DAMPING VALUES: 0, 2, 5, 10, 20%



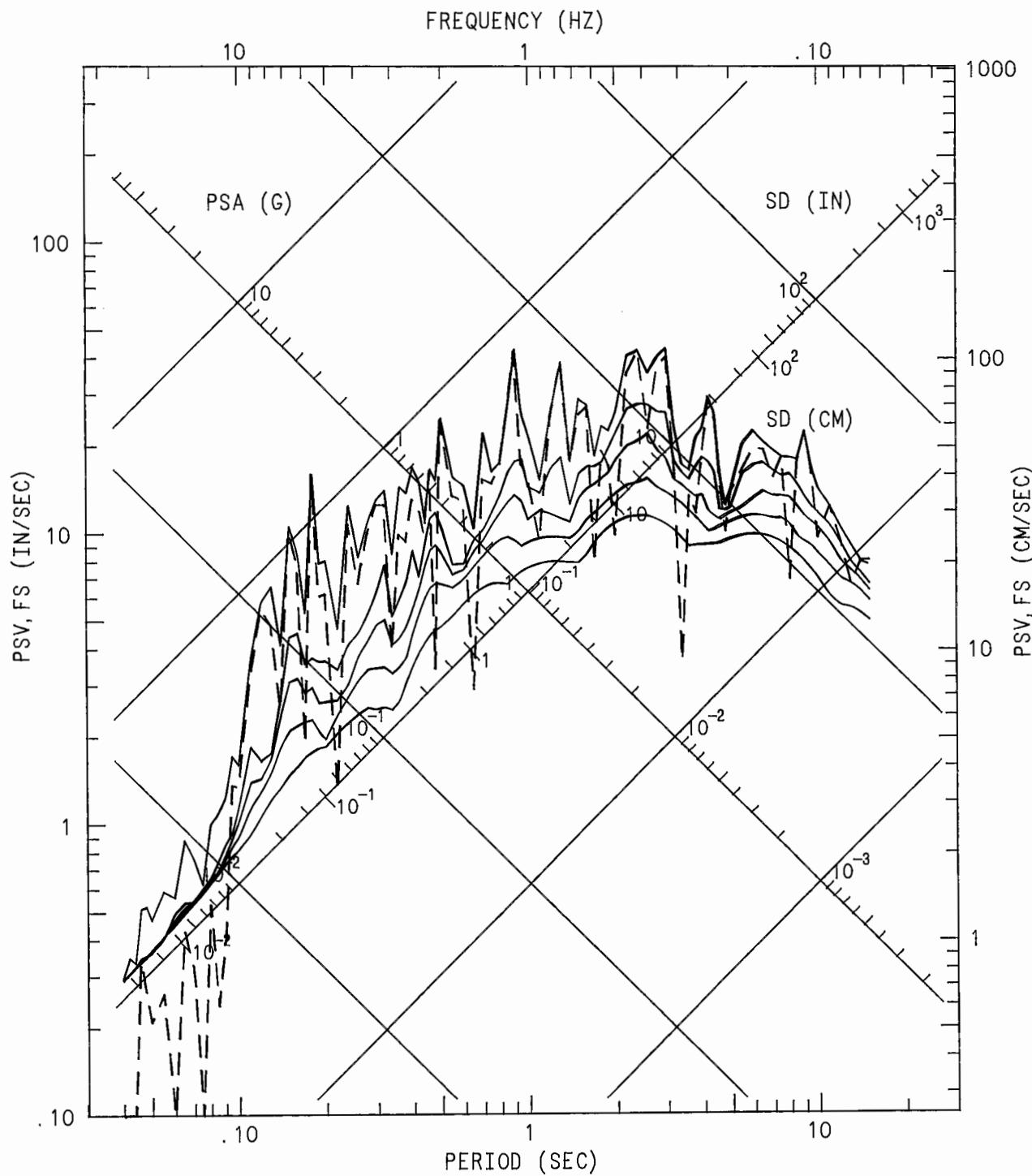
CAPE MENDOCINO EQ. (PRELIM. PROCESS.) APRIL 25, 1992 11:06 PDT
 FORTUNA - 701 S. FORTUNA BLVD.
 CHN 2: UP

ACCELEROGRAF BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 Hz.
 89486-S5086-92118.03 111972.1353-QP92A486

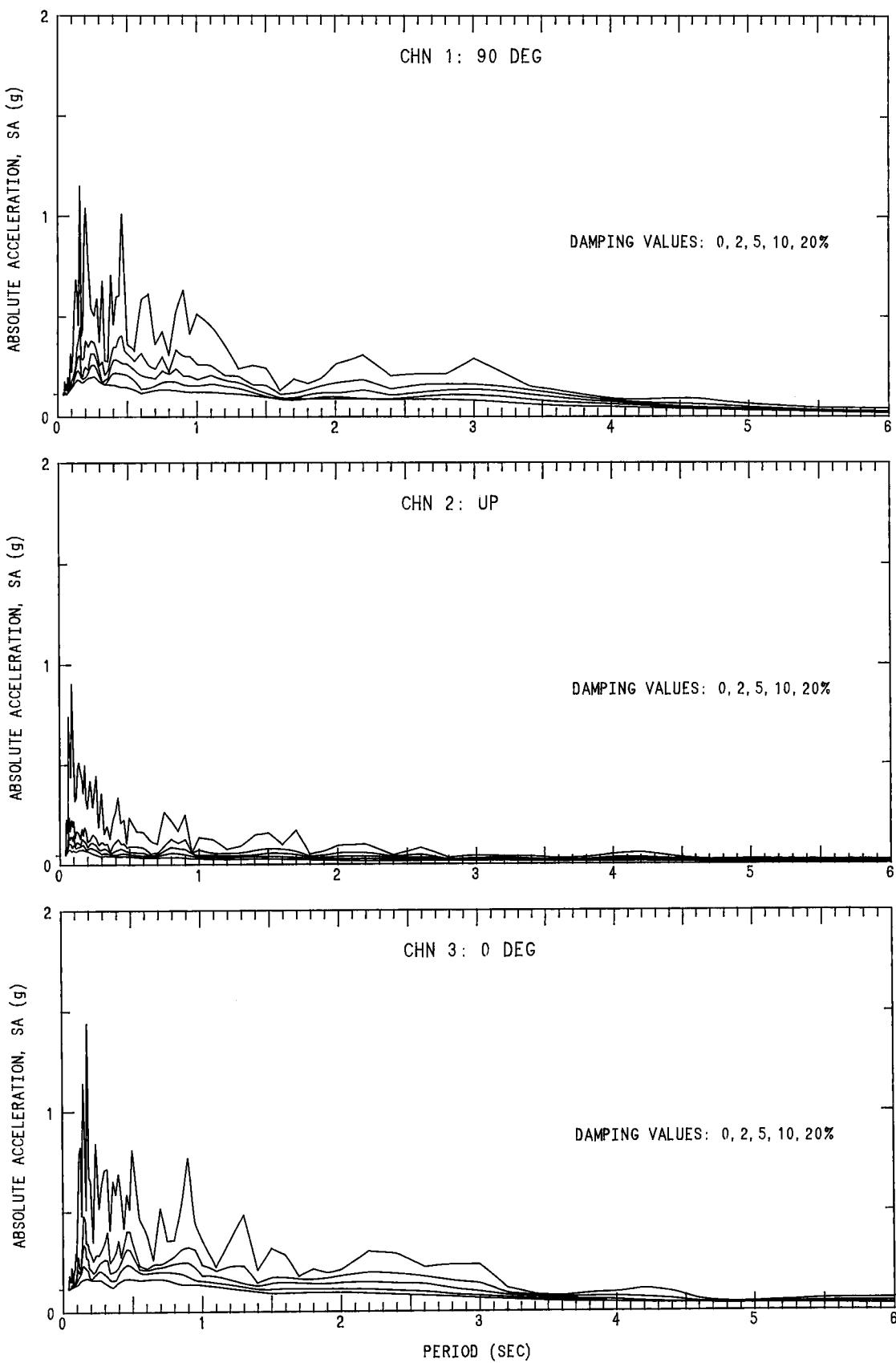


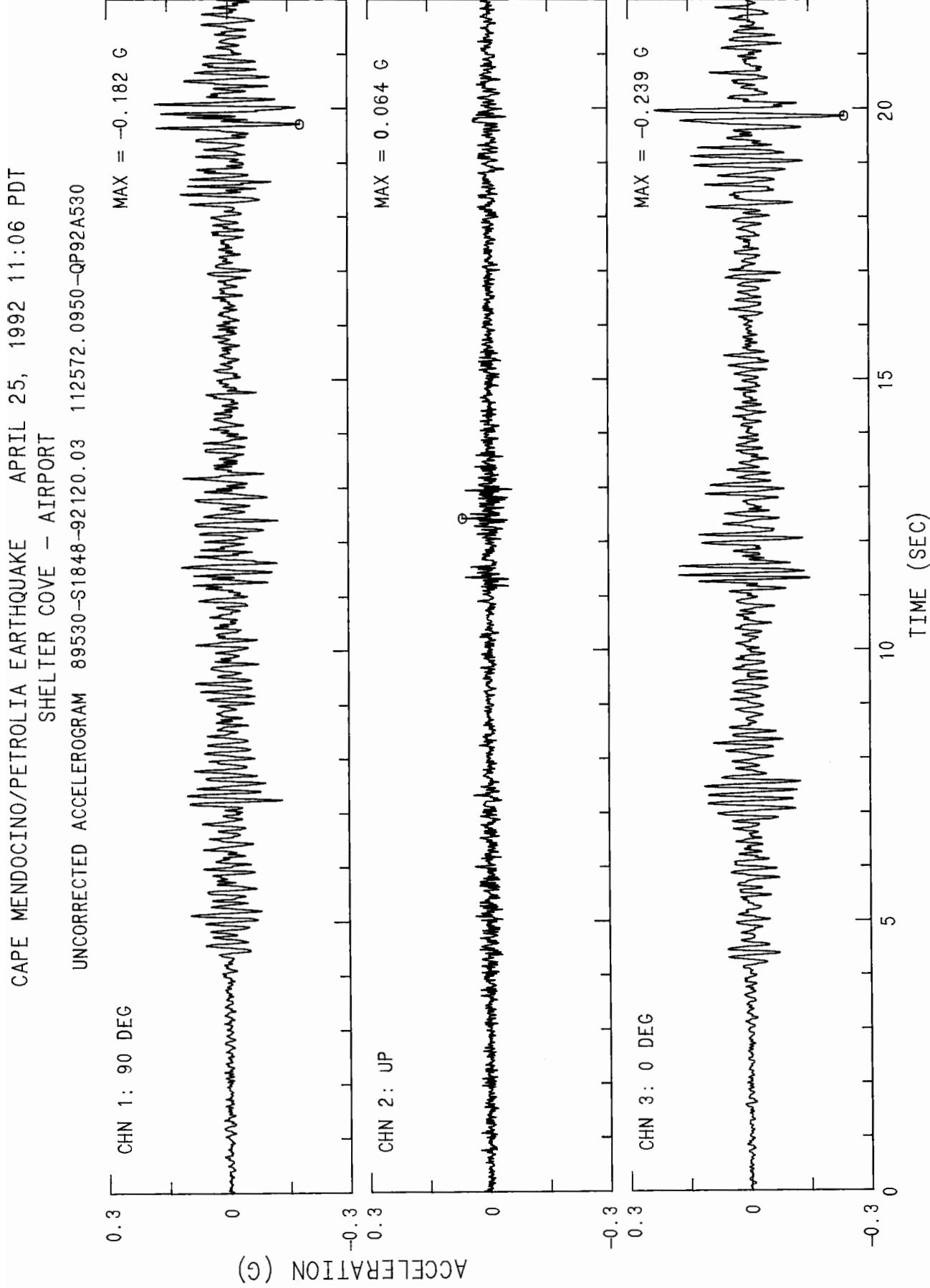
CAPE MENDOCINO EQ. (PRELIM. PROCESS.) APRIL 25, 1992 11:06 PDT
 FORTUNA - 701 S. FORTUNA BLVD.
 CHN 3: 0 DEG
 ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .05-.07 TO 23.0-25.0 Hz.
 89486-S5086-92118.03 111972.1353-QP92A486

— RESPONSE SPECTRA: PSV, PSA & SD — — FOURIER AMPLITUDE SPECTRUM: FS
 DAMPING VALUES: 0, 2, 5, 10, 20%

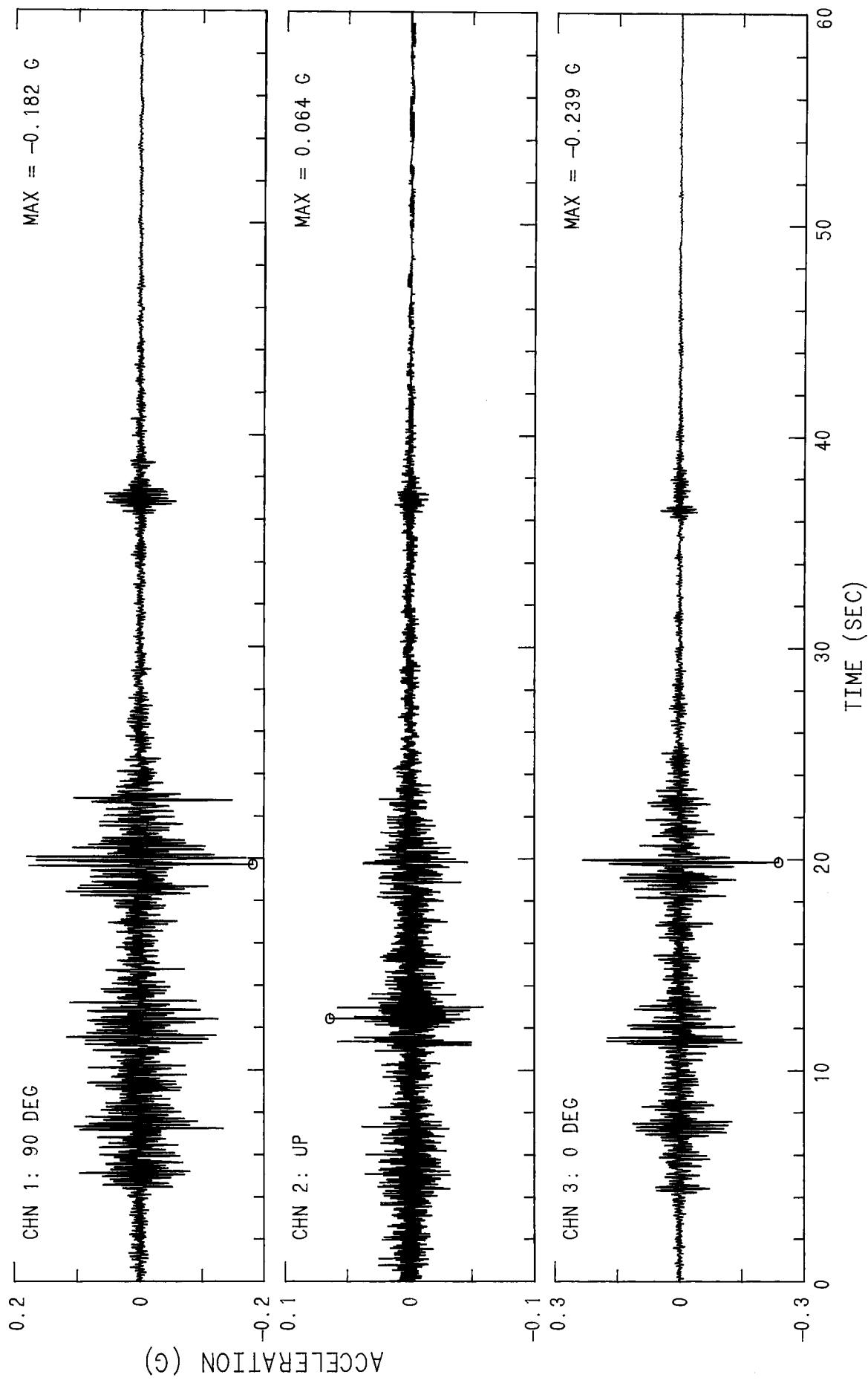


CAPE MENDOCINO EQ. (PRELIM. PROCESS.) APRIL 25, 1992 11:06 PDT
FORTUNA - 701 S. FORTUNA BLVD.
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPs AT .05-.07 TO 23.0-25.0 HZ.
89486-S5086-92118.03 111872.1353-QP92A486

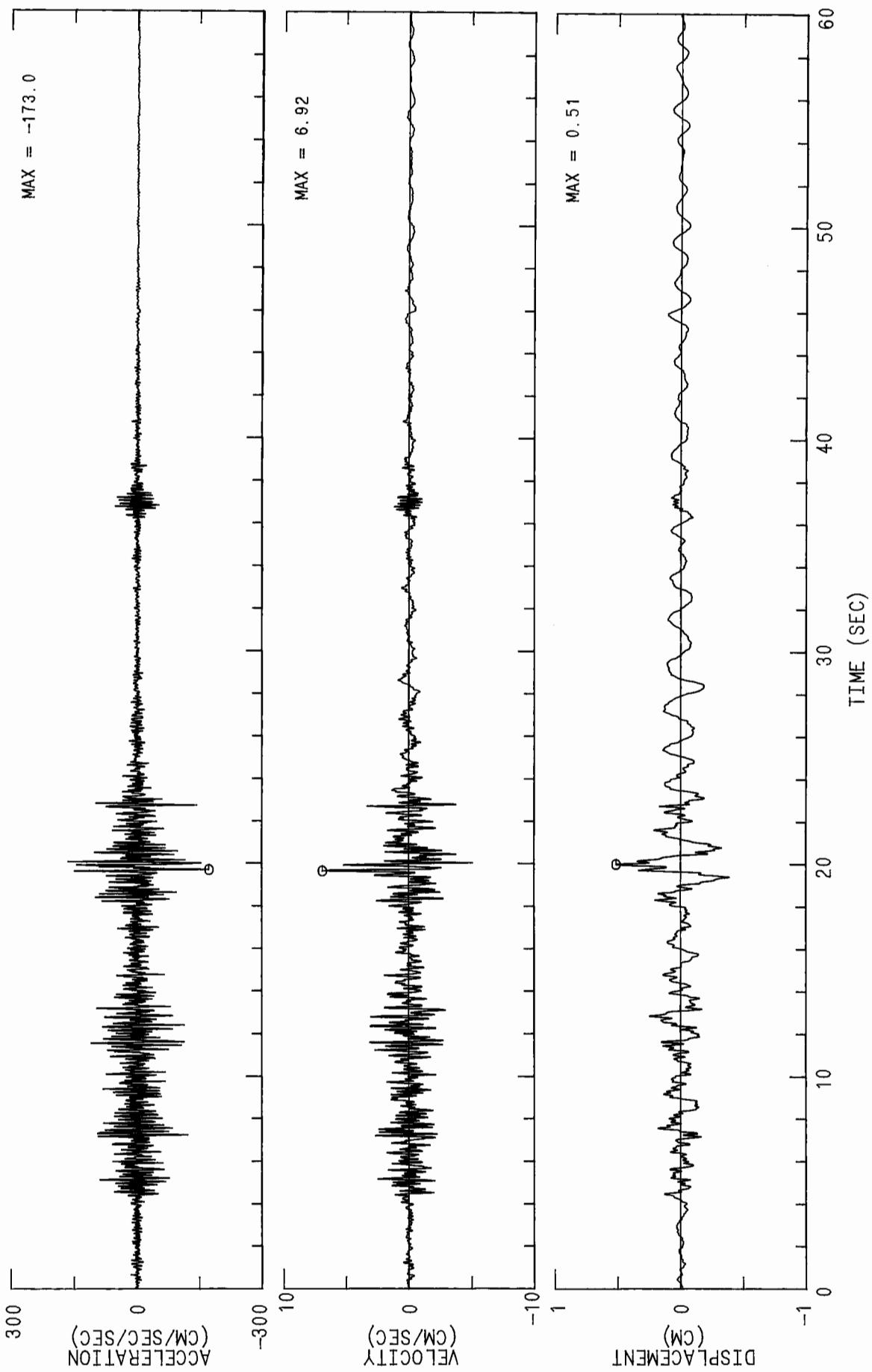


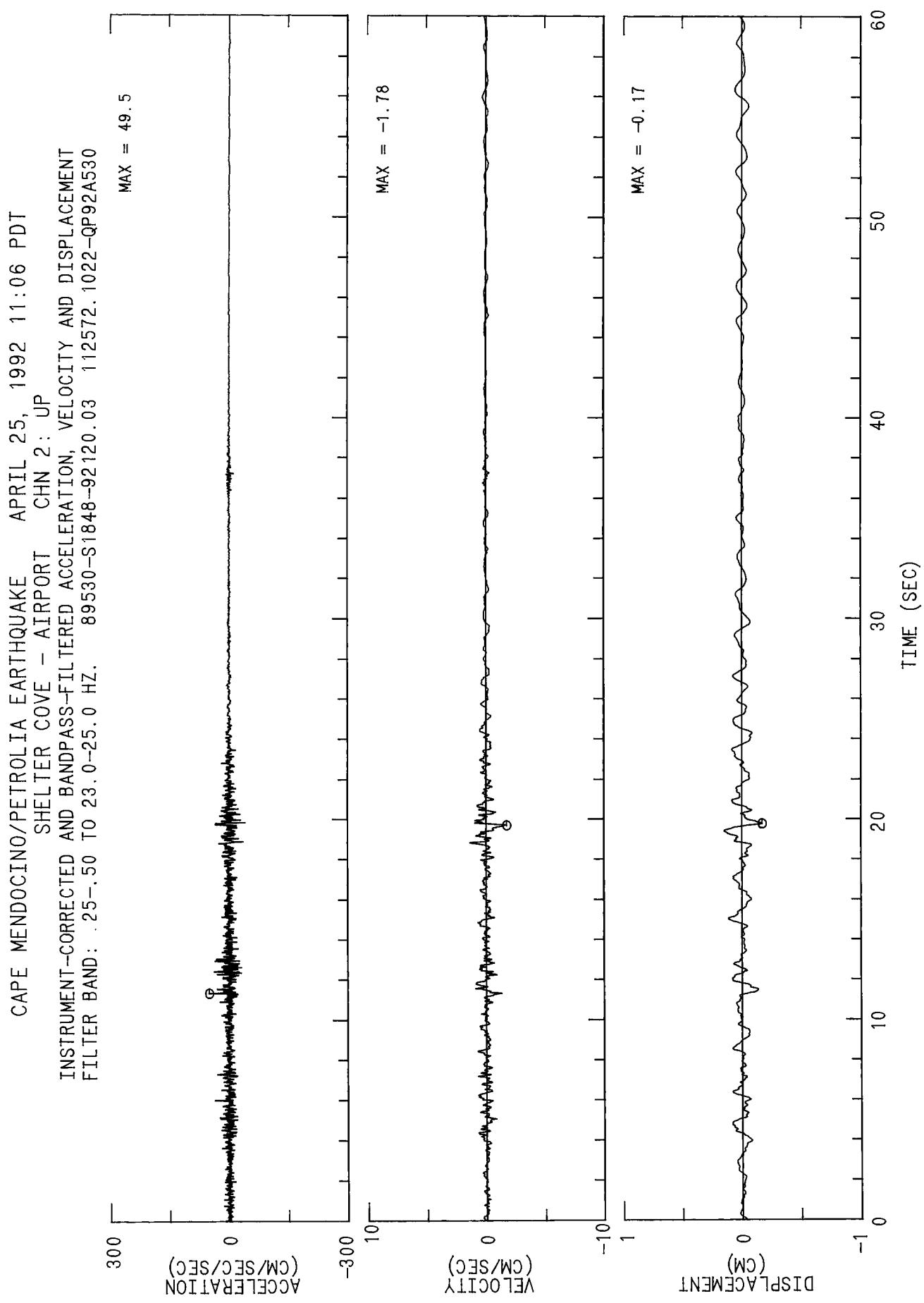


CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
SHELTER COVE - AIRPORT
UNCORRECTED ACCELERGRAM 89530-S1848-92120.03 112572.0950-QP92A530

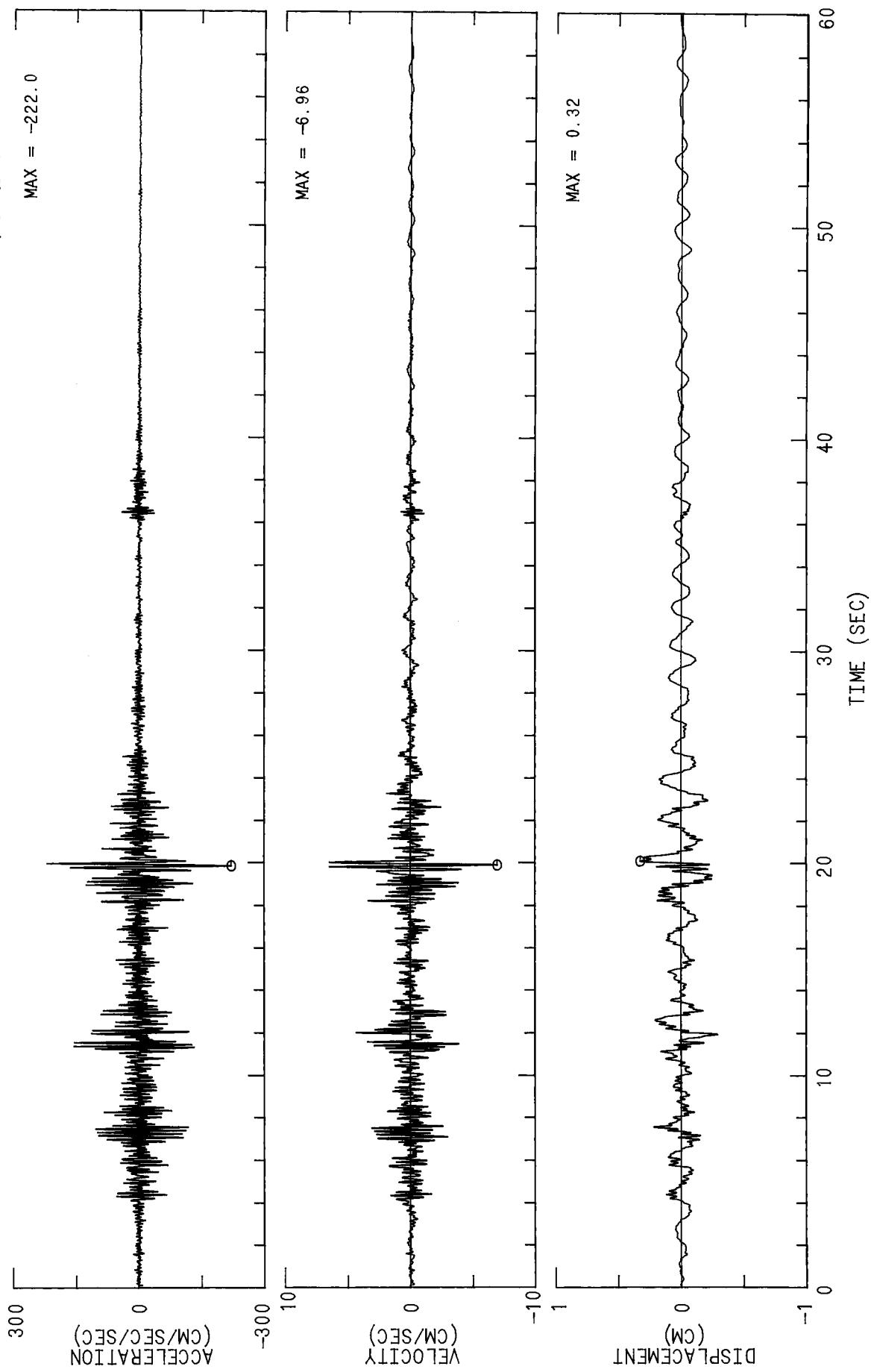


CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 SHELTER COVE - AIRPORT CHN 1: 90 DEG
 INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
 FILTER BAND: .25-.50 TO 23.0-25.0 HZ. 89530-S1848-92120.03 112572.1022-QP92A530

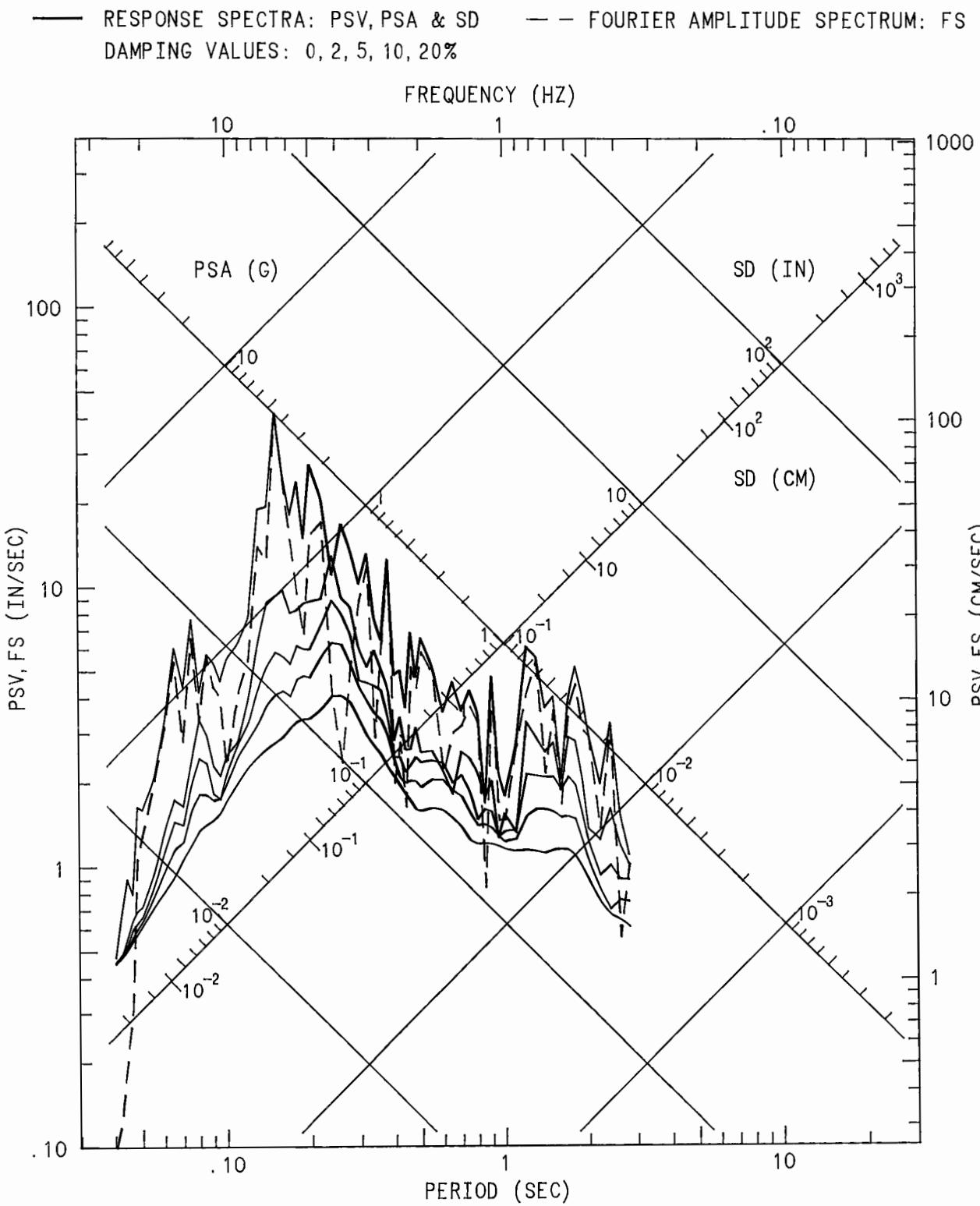




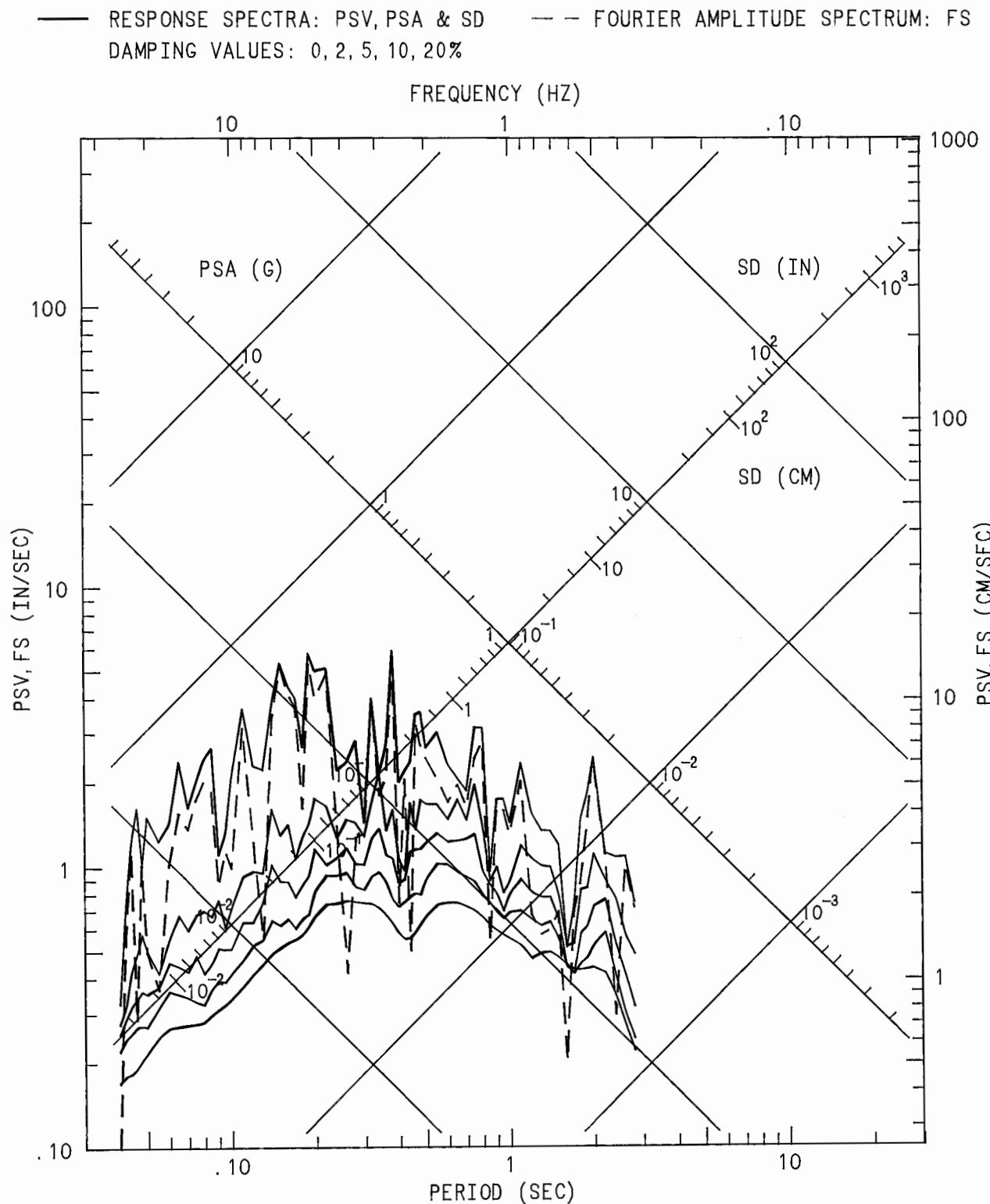
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
SHELTER COVE - AIRPORT CHN 3: 0 DEG
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .25-.50 TO 23.0-25.0 HZ. 89530-S1848-92120.03 112572.1022-QP92A530



CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 SHELTER COVE - AIRPORT
 CHN 1: 90 DEG
 ACCELEROGRAF BANDPASS-FILTERED WITH RAMPS AT .25-.50 TO 23.0-25.0 Hz.
 89530-S1848-92120.03 112672.1039-QP92A530

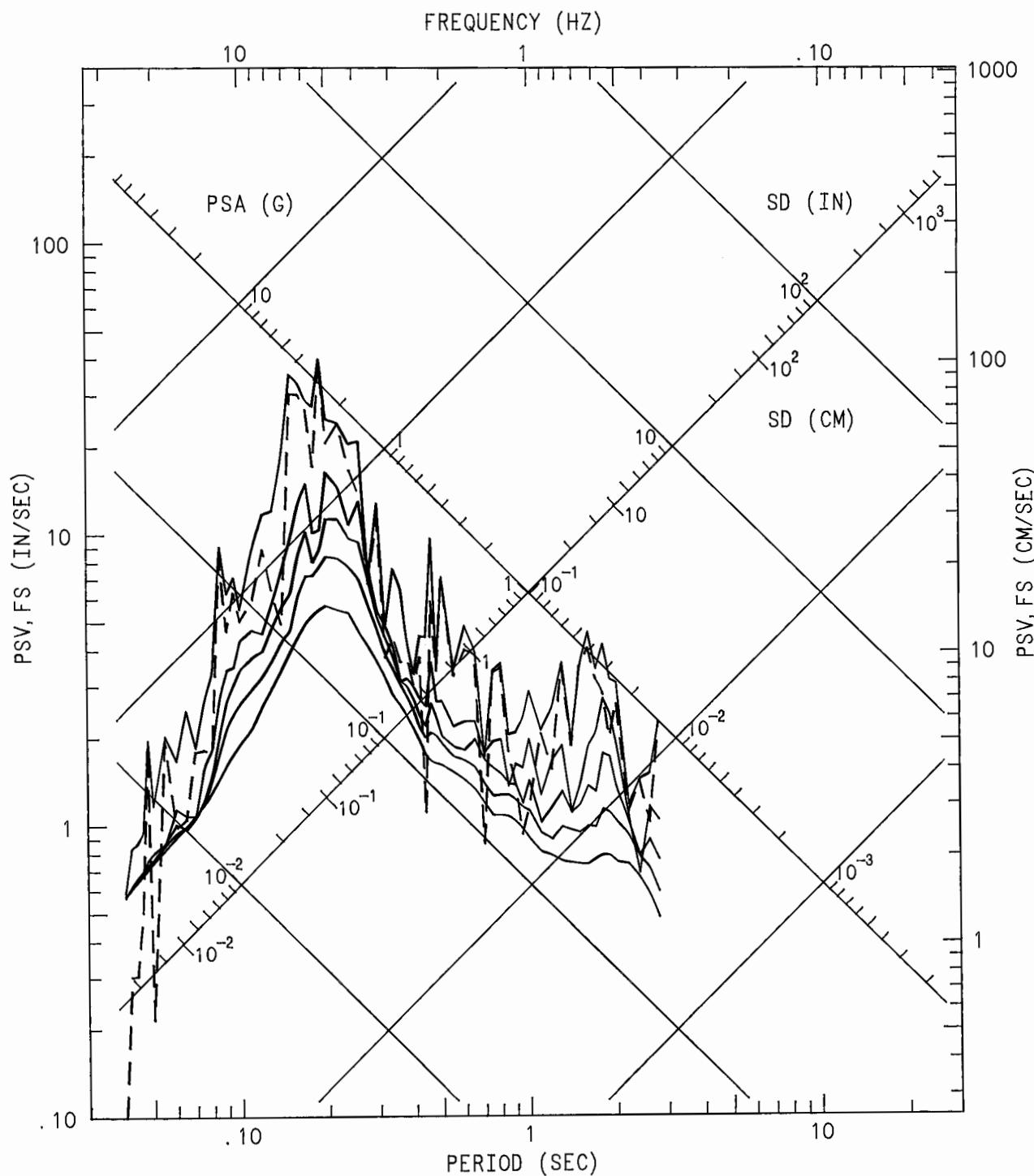


CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 SHELTER COVE - AIRPORT
 CHN 2: UP
 ACCELEROMGRAM BANDPASS-FILTERED WITH RAMPS AT .25-.50 TO 23.0-25.0 Hz.
 89530-S1848-92120.03 112672.1039-QP92A530

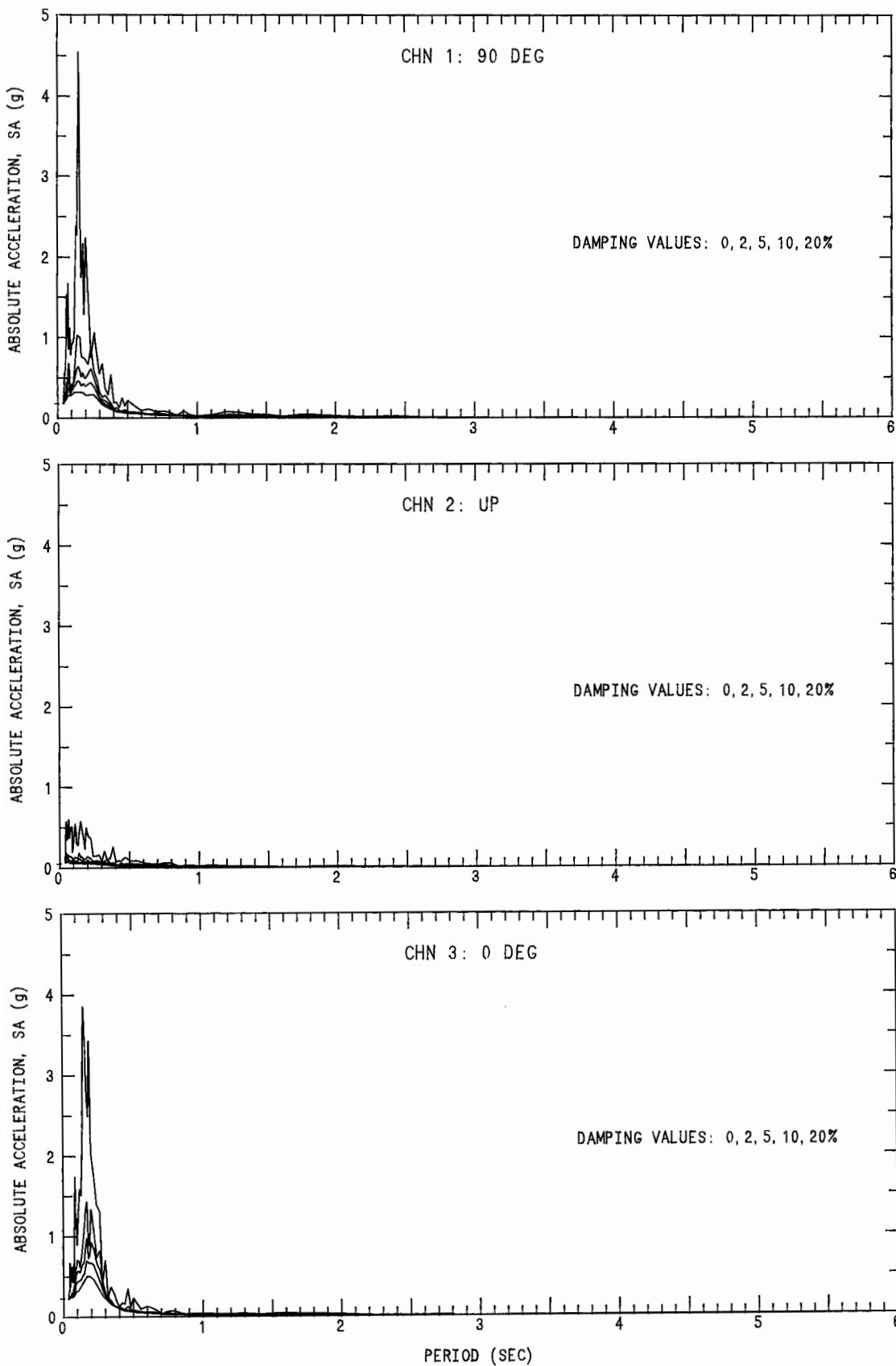


CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 SHELTER COVE - AIRPORT
 CHN 3: 0 DEG
 ACCELEROMGRAM BANDPASS-FILTERED WITH RAMPS AT .25-.50 TO 23.0-25.0 Hz.
 89530-S1848-92120.03 112672.1039-QP92A530

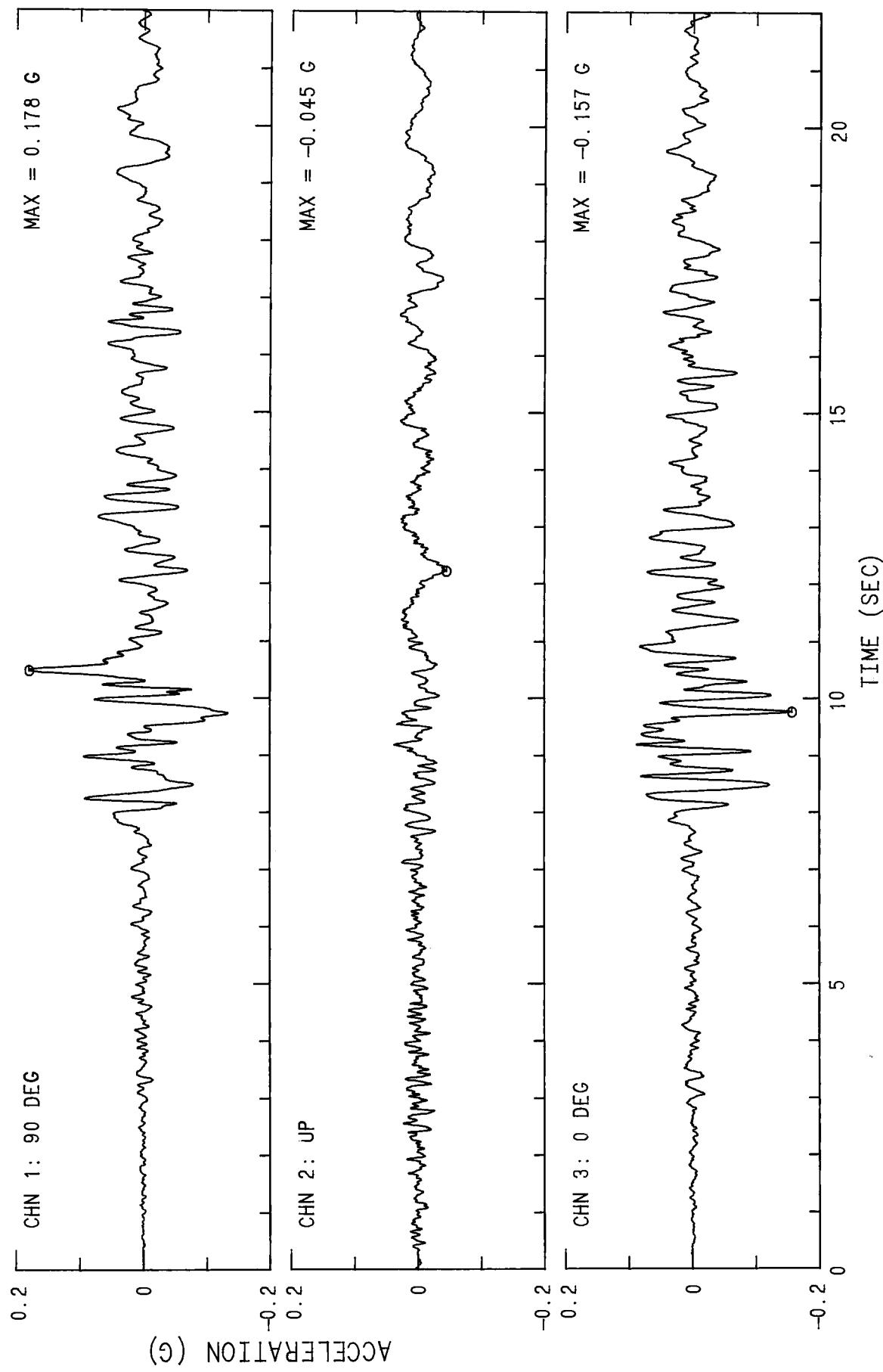
— RESPONSE SPECTRA: PSV, PSA & SD — — FOURIER AMPLITUDE SPECTRUM: FS
 DAMPING VALUES: 0, 2, 5, 10, 20%



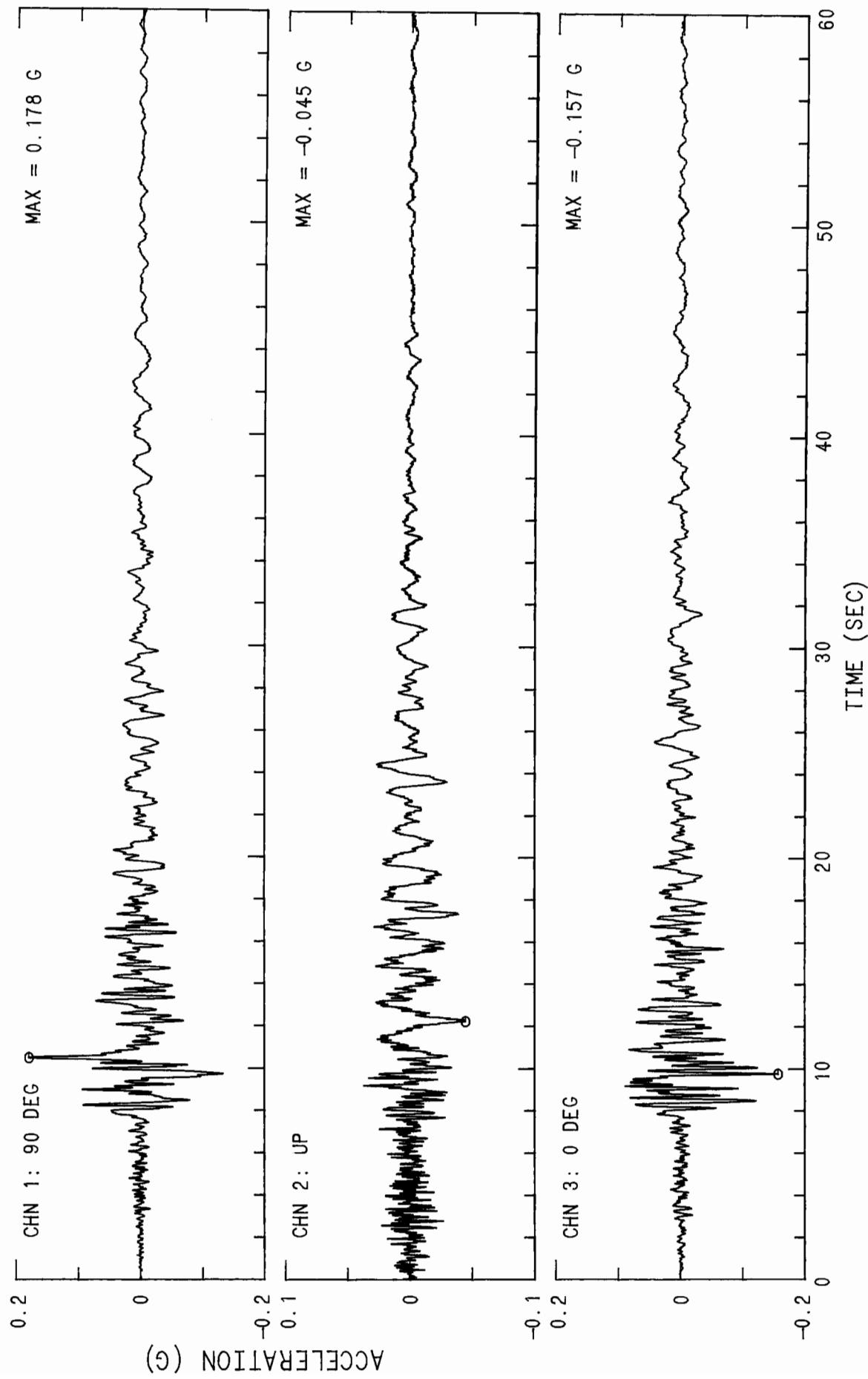
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
SHELTER COVE - AIRPORT
ACCELEROMGRAM BANDPASS-FILTERED WITH RAMPS AT .25-.50 TO 23.0-25.0 HZ.
89530-S1848-92120.03 112572.1039-QP92A530



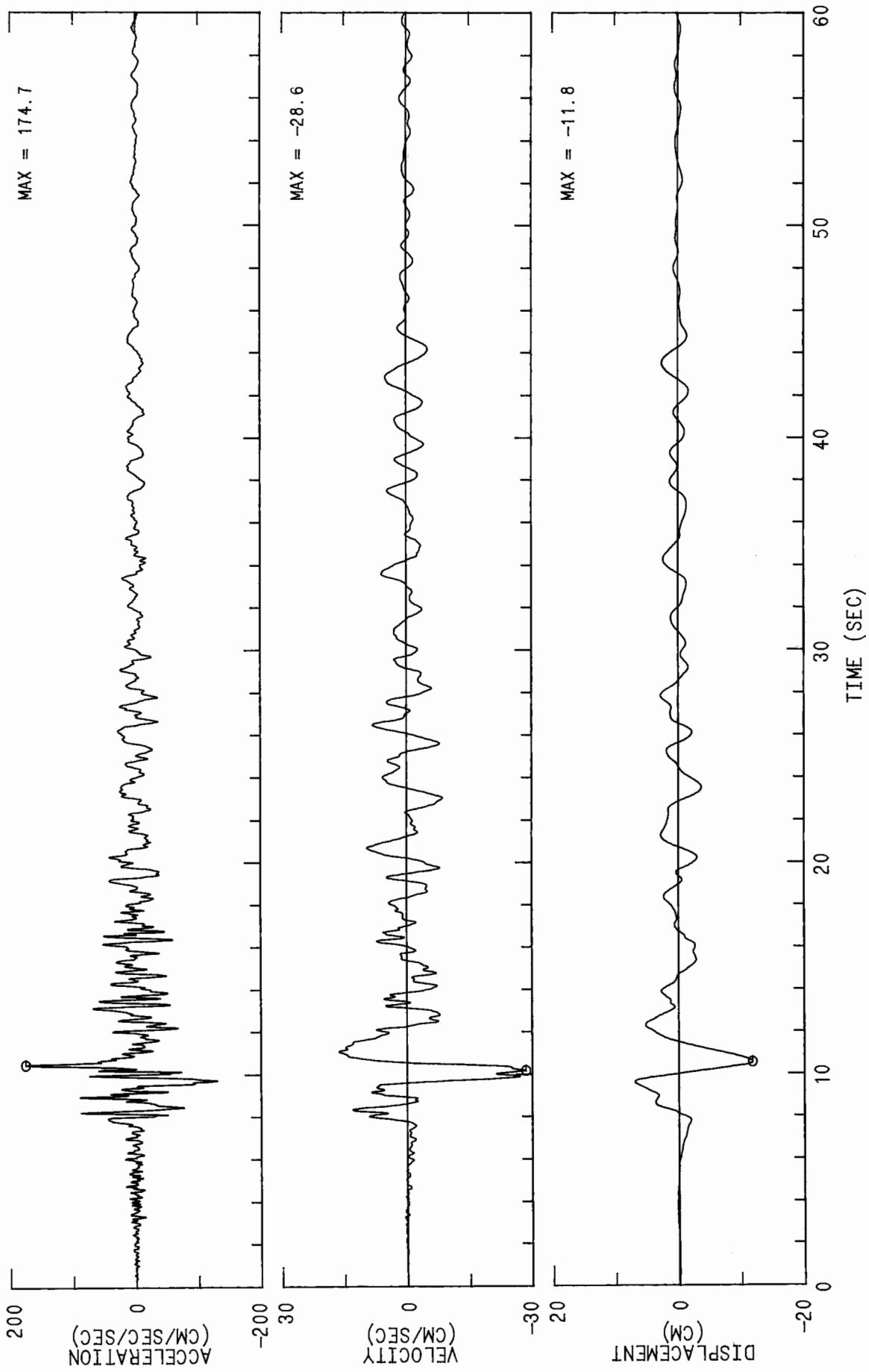
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
EUREKA - MYRTLE & WEST AVENUE
UNCORRECTED ACCELERGRAM 89509-S5088-92118.03 111772.0947-QP92A509



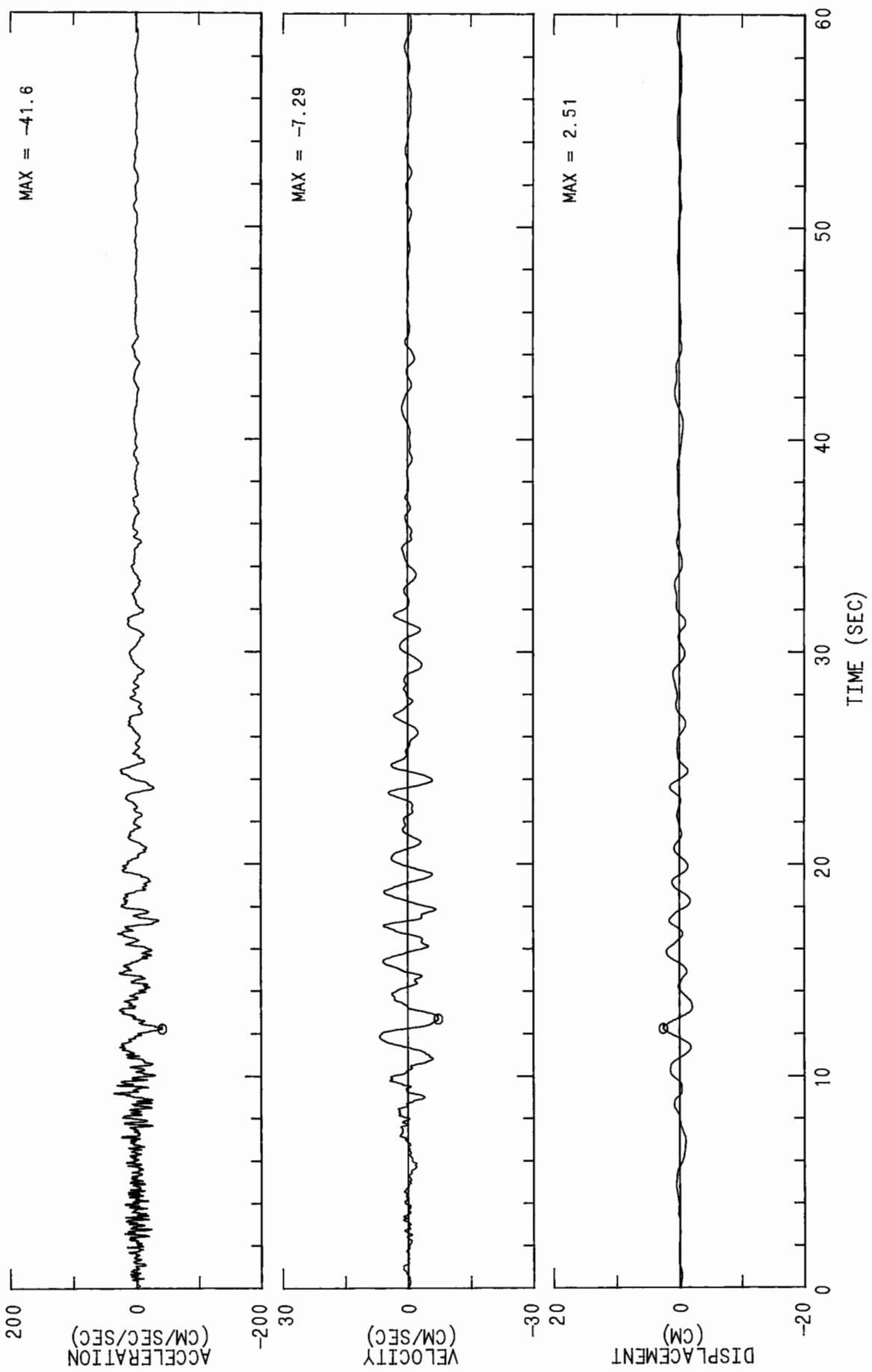
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
EUREKA - MYRTLE & WEST AVENUE
UNCORRECTED ACCELERPROGRAM 89509-S5088-92118.03 111772.0947-QP92A509



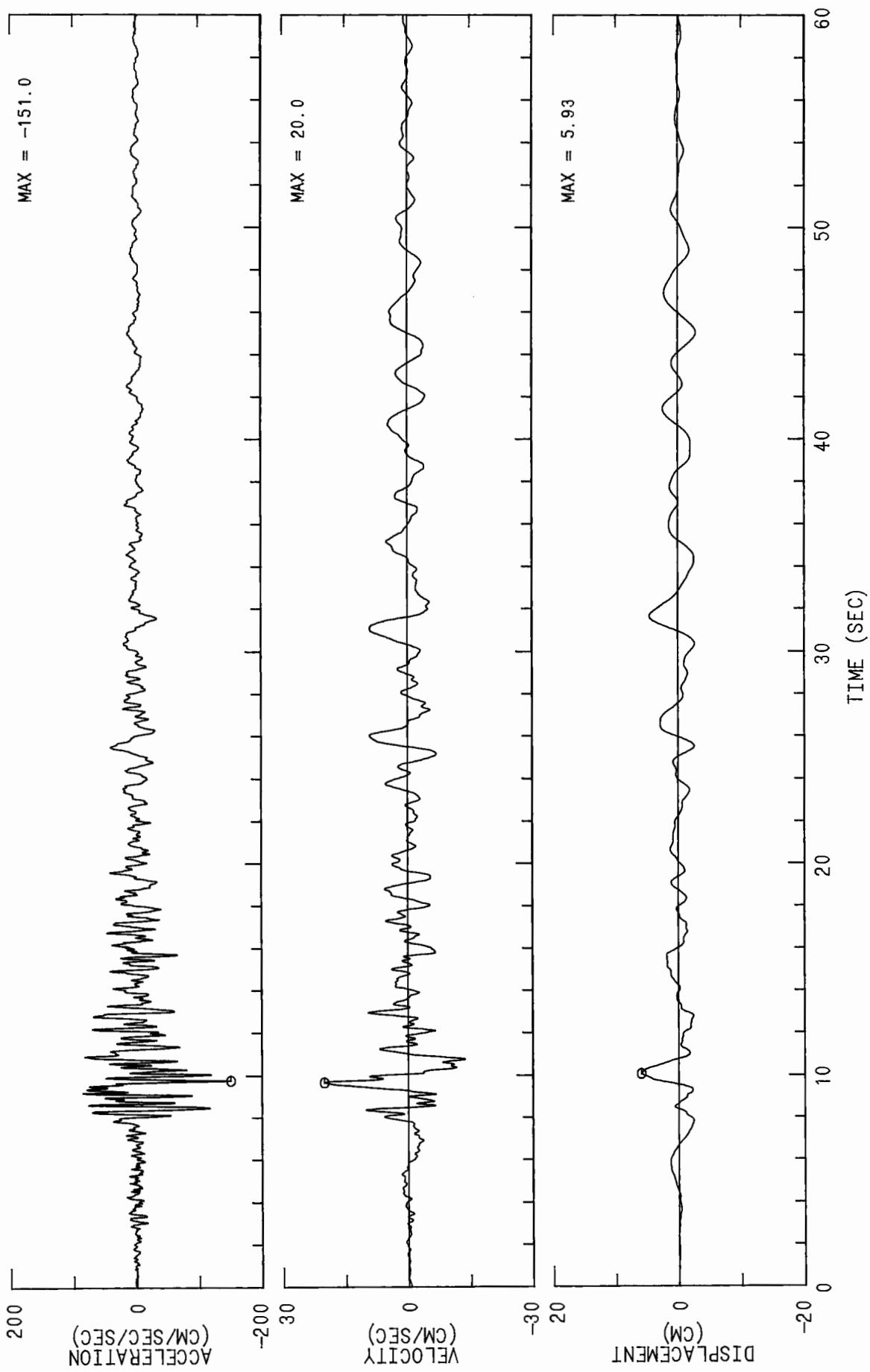
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
EUREKA - MYRTLE & WEST AVENUE CHN 1: 90 DEG
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .08-.16 TO 23.0-25.0 HZ. 89509-S5088-92118.03 112572.0813-QP92A509



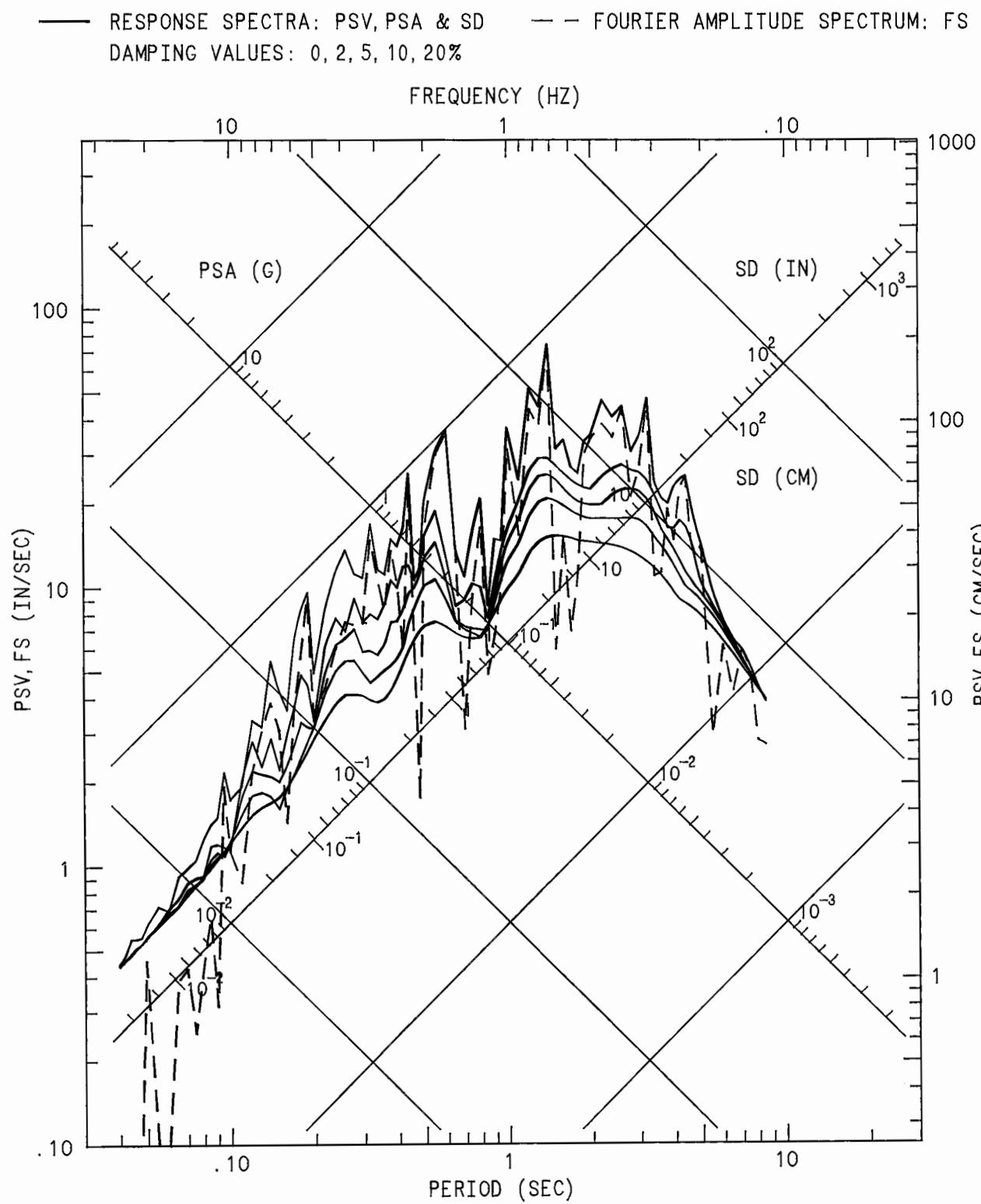
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 EUREKA - MYRTLE & WEST AVENUE CHN 2: UP
 INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
 FILTER BAND: .08-.16 TO 23.0-25.0 HZ. 89509-S5088-92118.03 112572.0813-QP92A509



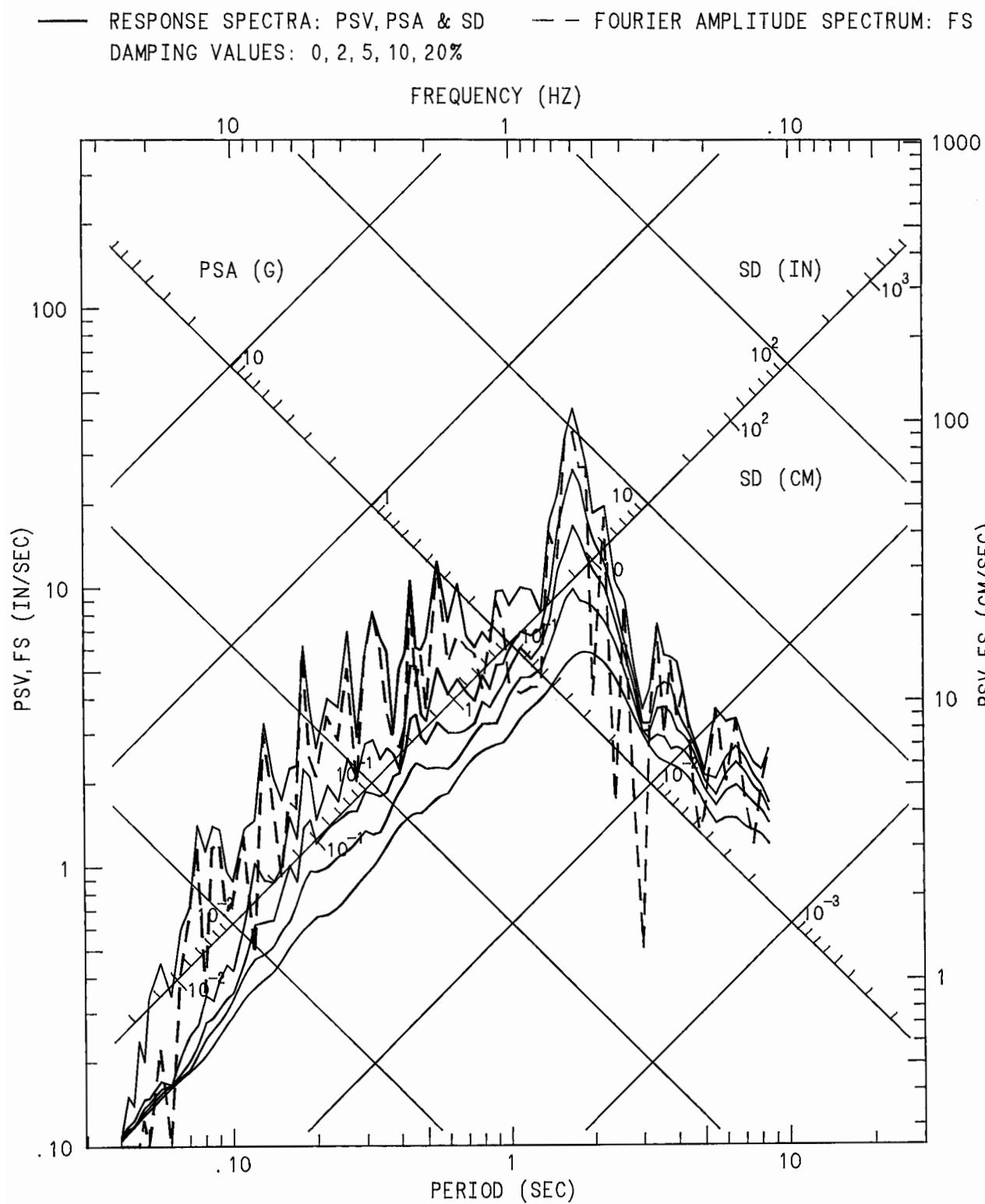
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
EUREKA - MYRTLE & WEST AVENUE CHN 3: 0 DEG
INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
FILTER BAND: .08-.16 TO 23.0-25.0 HZ. 89509-S5088-92118.03 112572.0813-QP92A509



CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 EUREKA - MYRTLE & WEST AVENUE
 CHN 1: 90 DEG
 ACCELEROGRAF BANDPASS-FILTERED WITH RAMPS AT .08-.16 TO 23.0-25.0 Hz.
 89509-S5088-92118.03 112672.0833-QP92A509

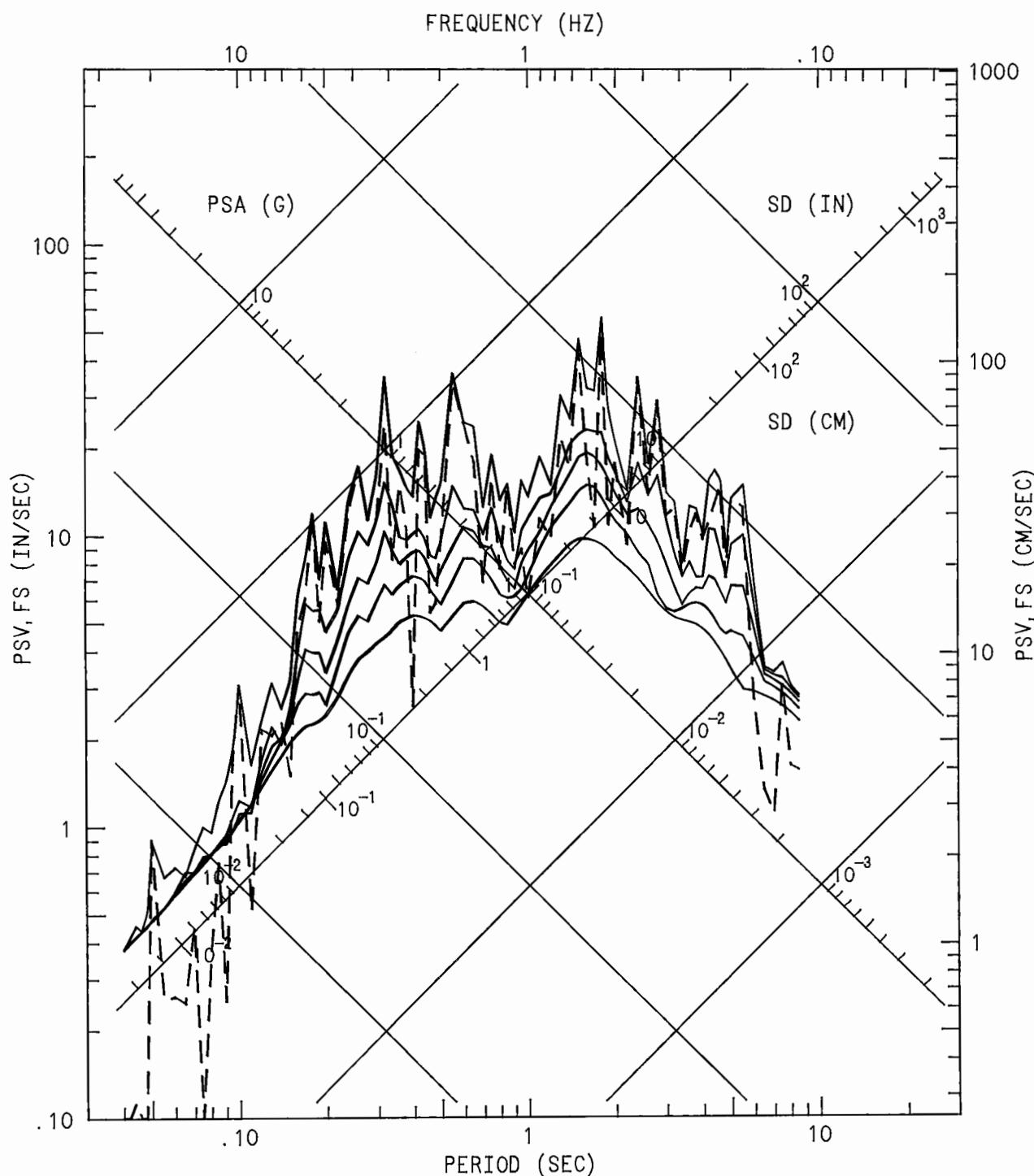


CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 EUREKA - MYRTLE & WEST AVENUE
 CHN 2: UP
 ACCELEROGRAF BANDPASS-FILTERED WITH RAMPS AT .08-.16 TO 23.0-25.0 HZ.
 89509-S5088-92118.03 112672.0833-QP92A509

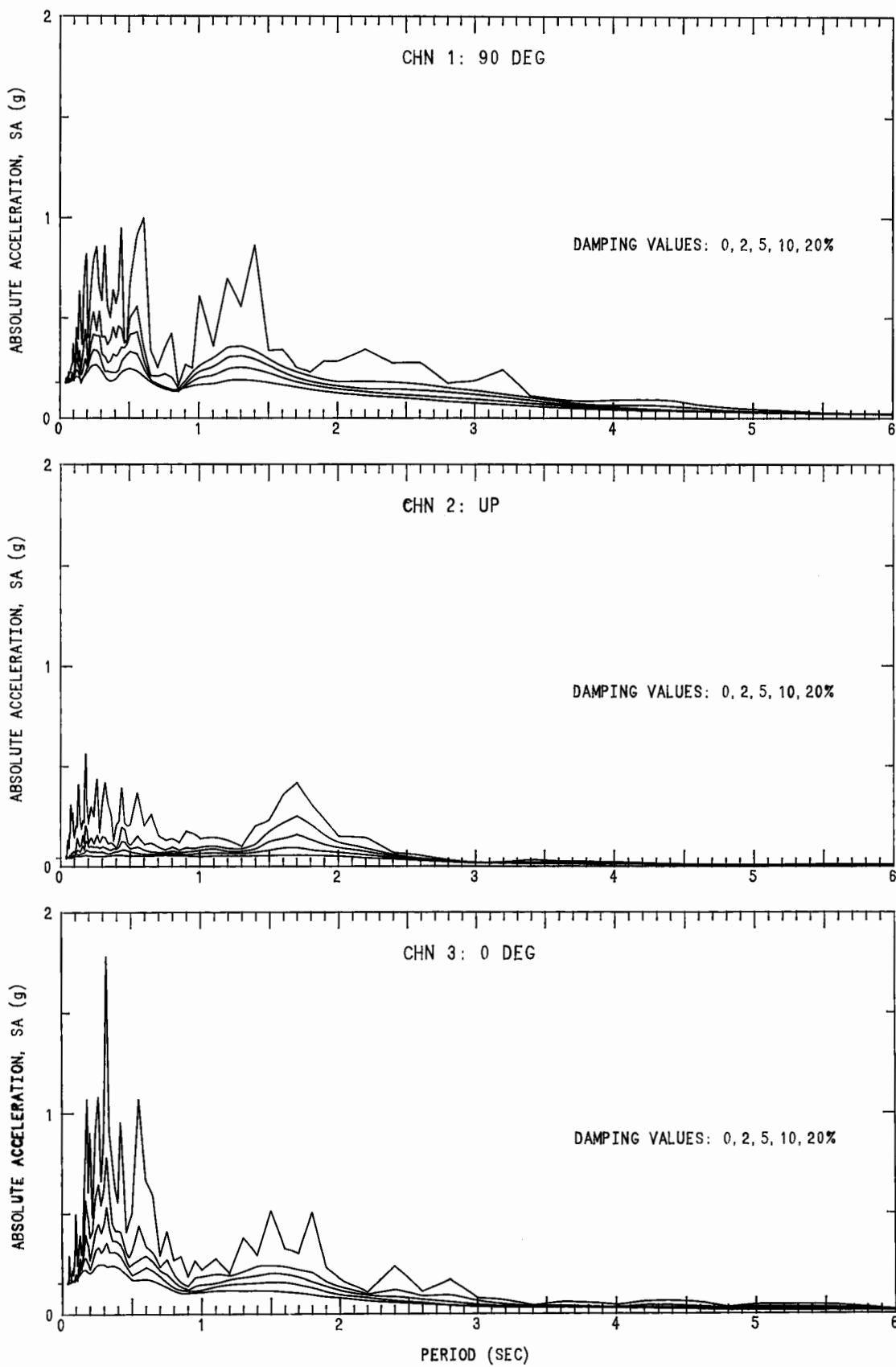


CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 EUREKA - MYRTLE & WEST AVENUE
 CHN 3: 0 DEG
 ACCELEROGRAF BANDPASS-FILTERED WITH RAMPS AT .08-.16 TO 23.0-25.0 Hz.
 89509-S5088-92118.03 112672.0833-QP92A509

— RESPONSE SPECTRA: PSV, PSA & SD — — FOURIER AMPLITUDE SPECTRUM: FS
 DAMPING VALUES: 0, 2, 5, 10, 20%

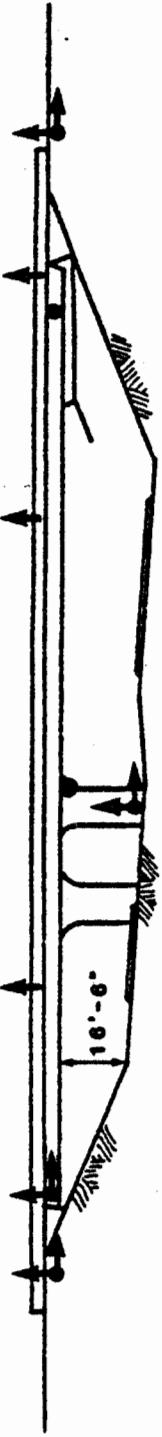


CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
EUREKA - MYRTLE & WEST AVENUE
ACCELEROMGRAM BANDPASS-FILTERED WITH RAMPS AT .08-.16 TO 23.0-25.0 HZ.
89509-S5088-92118.03 112572.0833-QP92A509

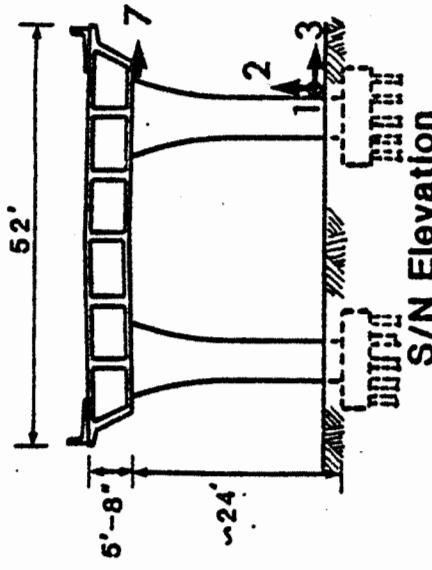


Rio Dell - Hwy 101/Painter Street Overpass
 (CSMIP Station No. 89324)

SENSOR LOCATIONS



E/W Elevation



S/N Elevation

38.9° skew
 (typical)



N_{ref}

19
18
20

5
4

6
7
8
9
10
11
12
13
14
15
16
17
18
19
20

Deck Plan

Structure Reference
 Orientation: N=2°

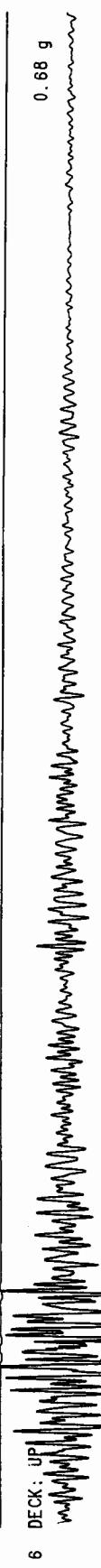
Scotia

To Fortuna

320'

RIO DELL - 101/PAINTER ST. OVERPASS

RECORD 89324-C0161-92118.04 CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT

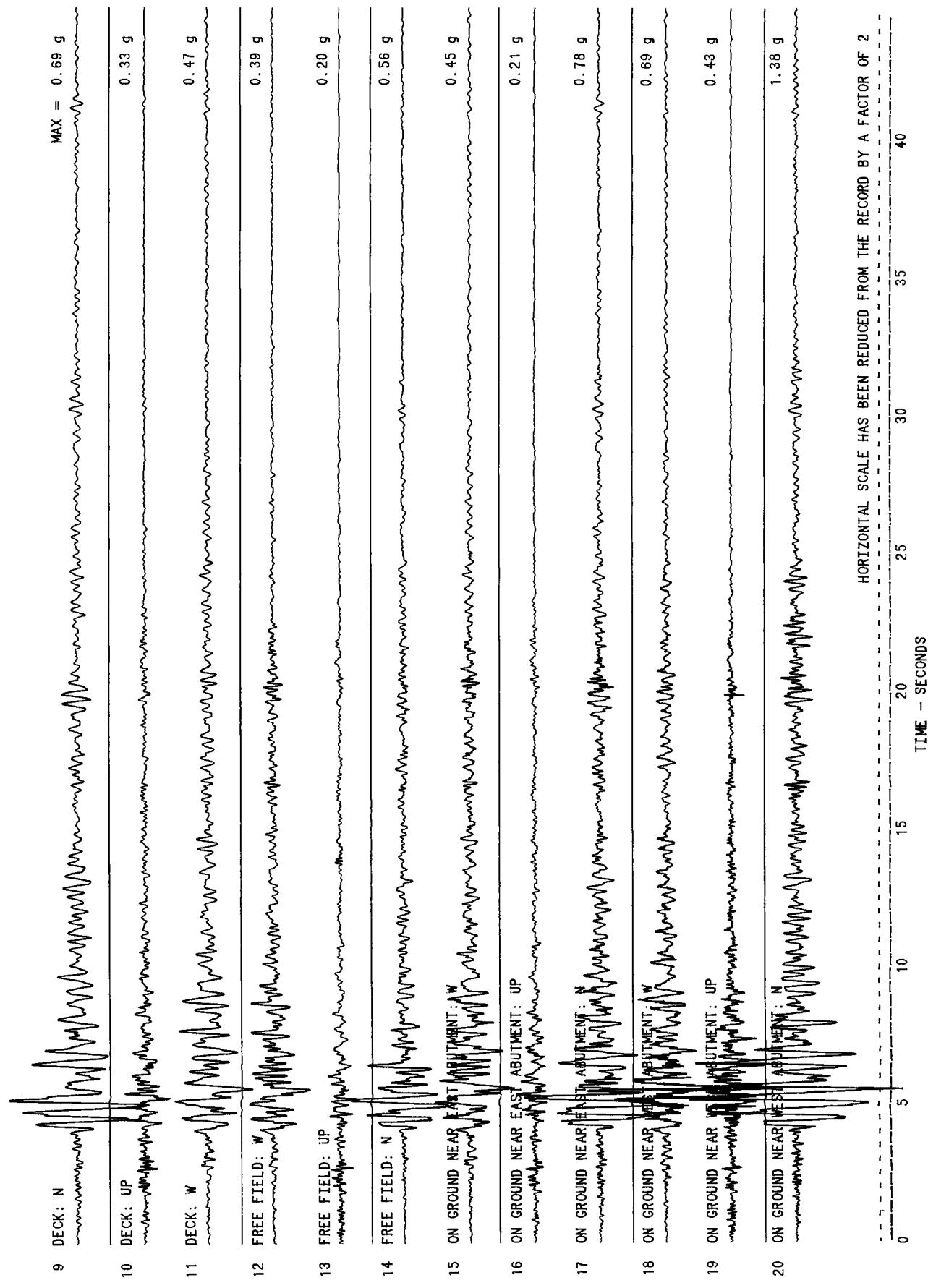


HORIZONTAL SCALE HAS BEEN REDUCED FROM THE RECORD BY A FACTOR OF 2
 0 5 10 15 20 25 30 35 40
 TIME - SECONDS

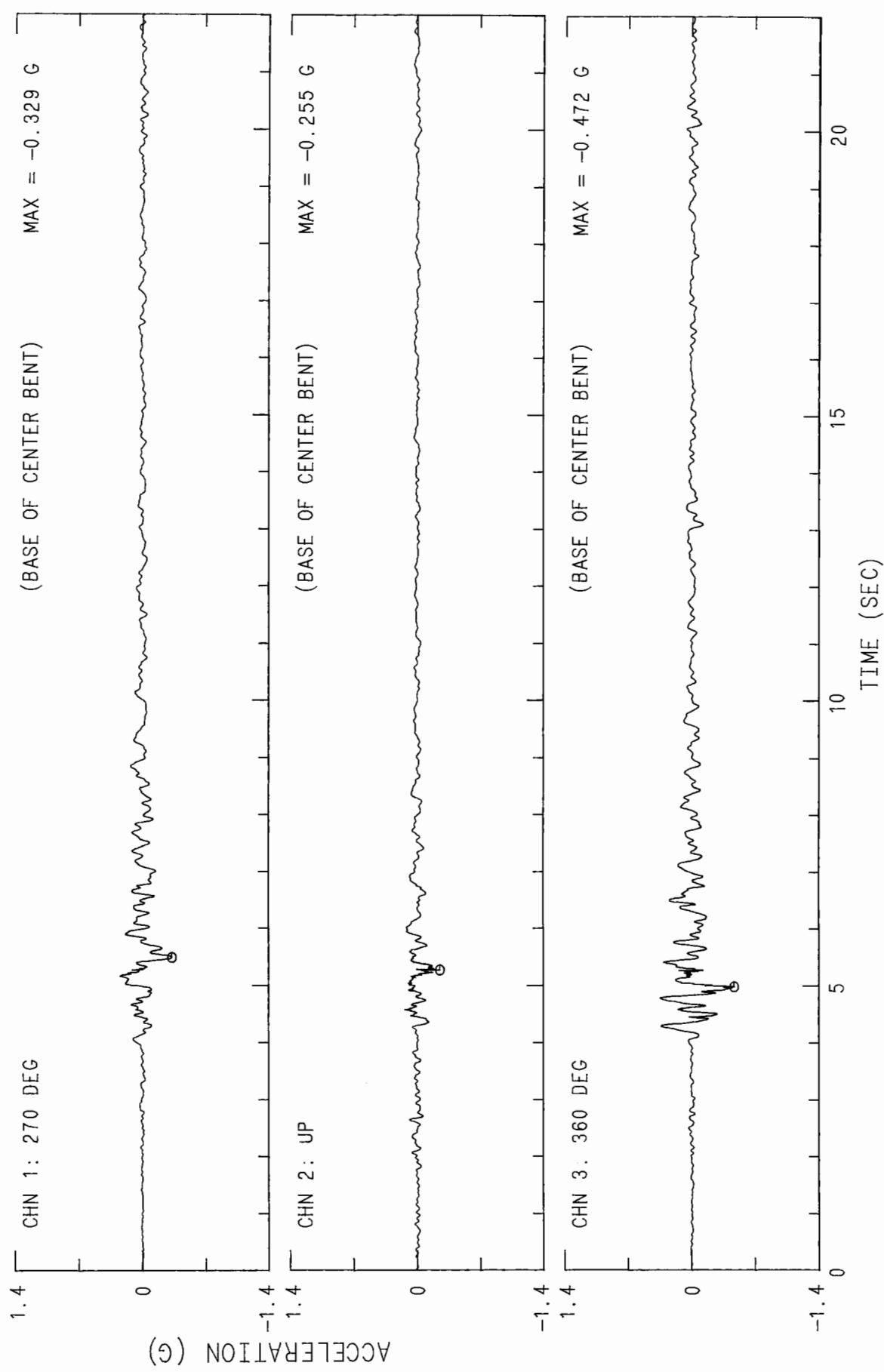
RIO DELL - 101/PAINTER ST. OVERPASS

RECORD 89324-C0138-92118.04

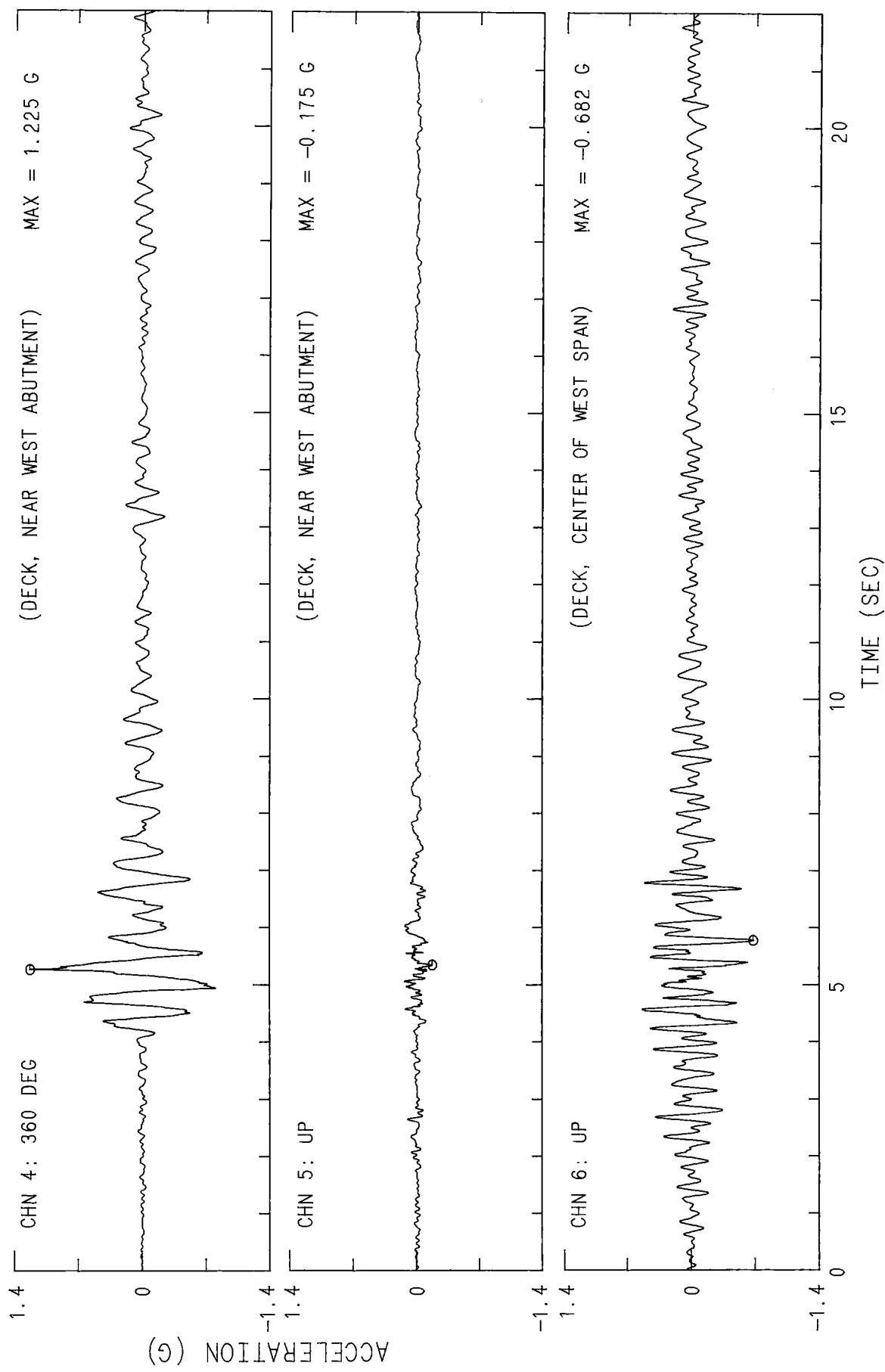
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT



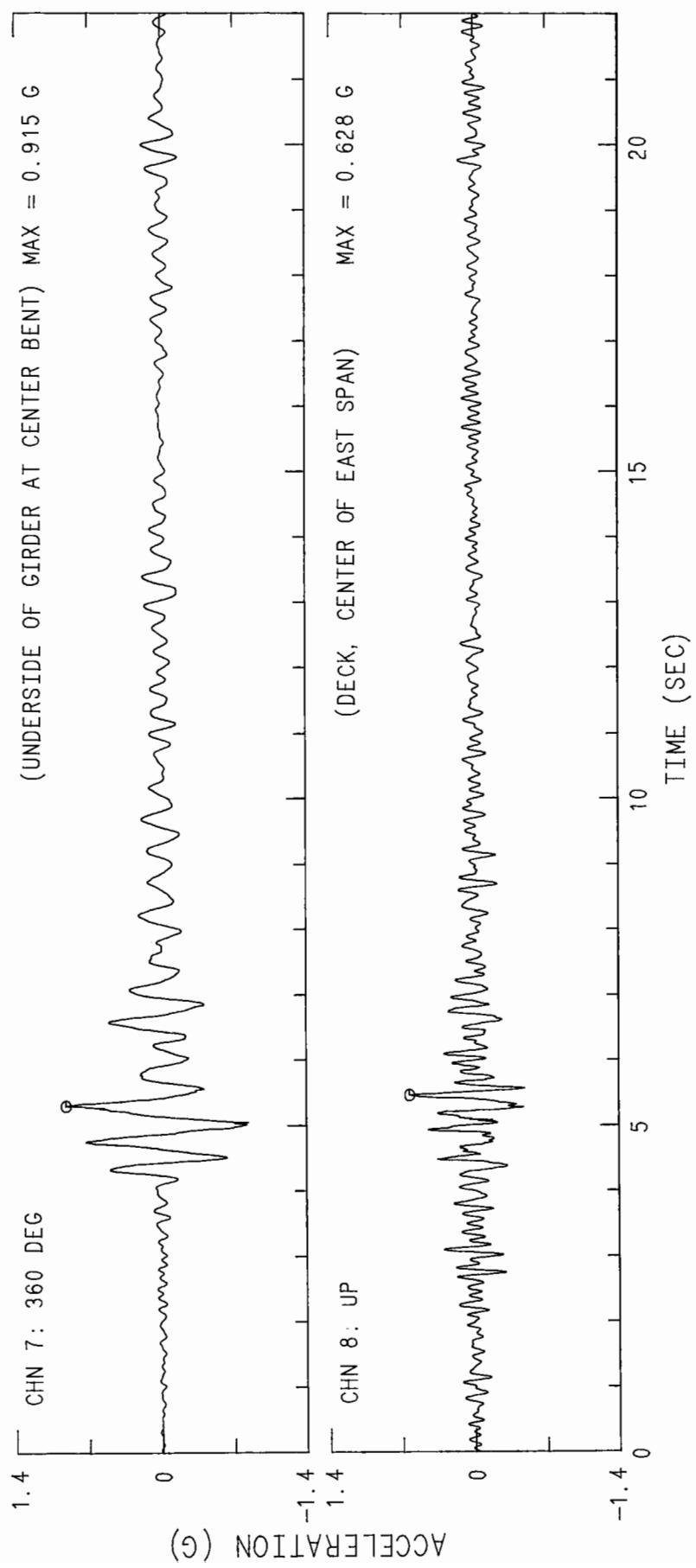
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL – 101/PAINTER ST. OVERPASS
 UNCORRECTED ACCELERограм 89324-C0161-92118.04 113072.1143-QP92A324



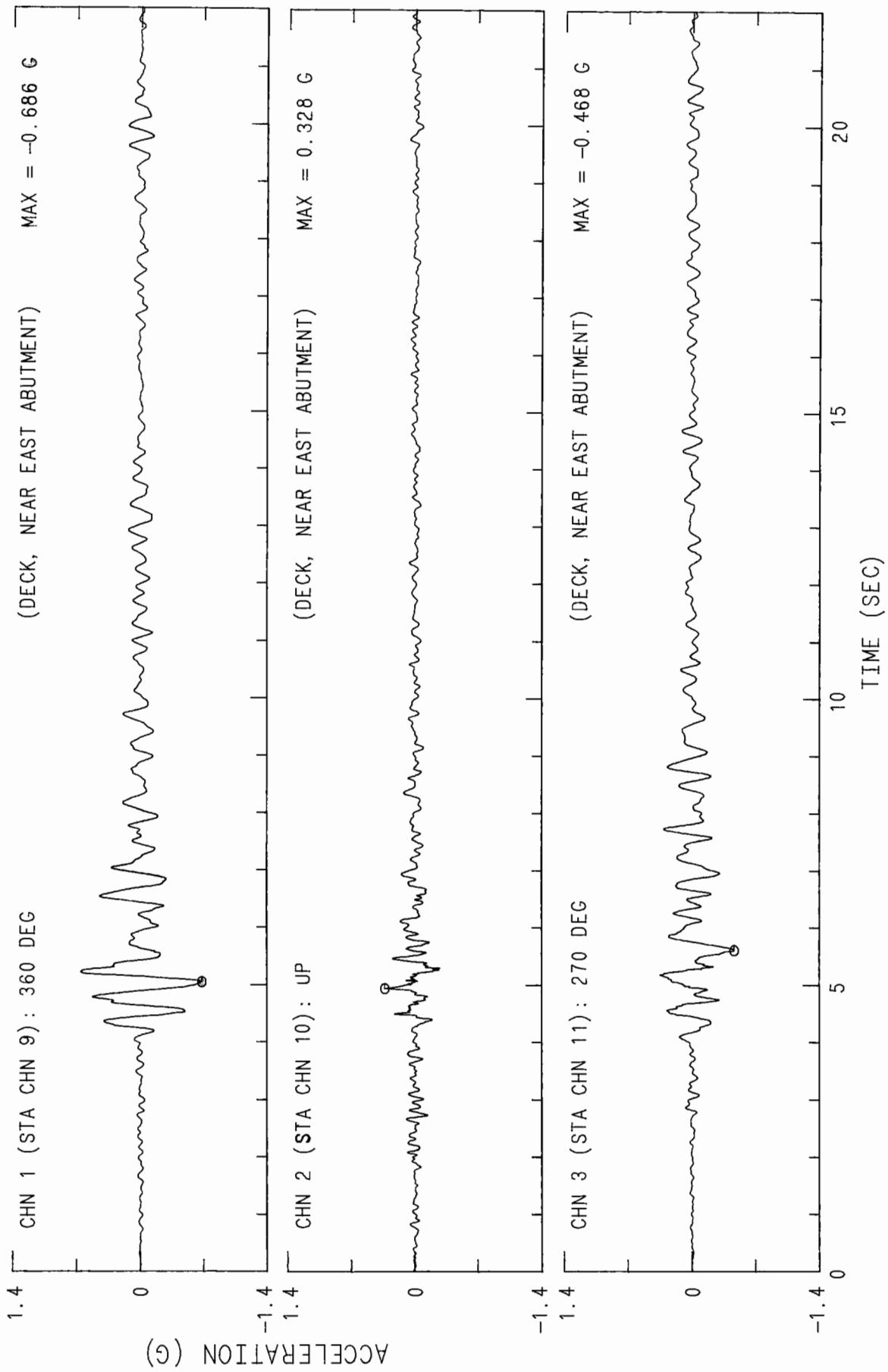
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL – 101/PAINTER ST. OVERPASS
 UNCORRECTED ACCELERogram 88324-C0161-92118.04 113072.1143-QP92A324



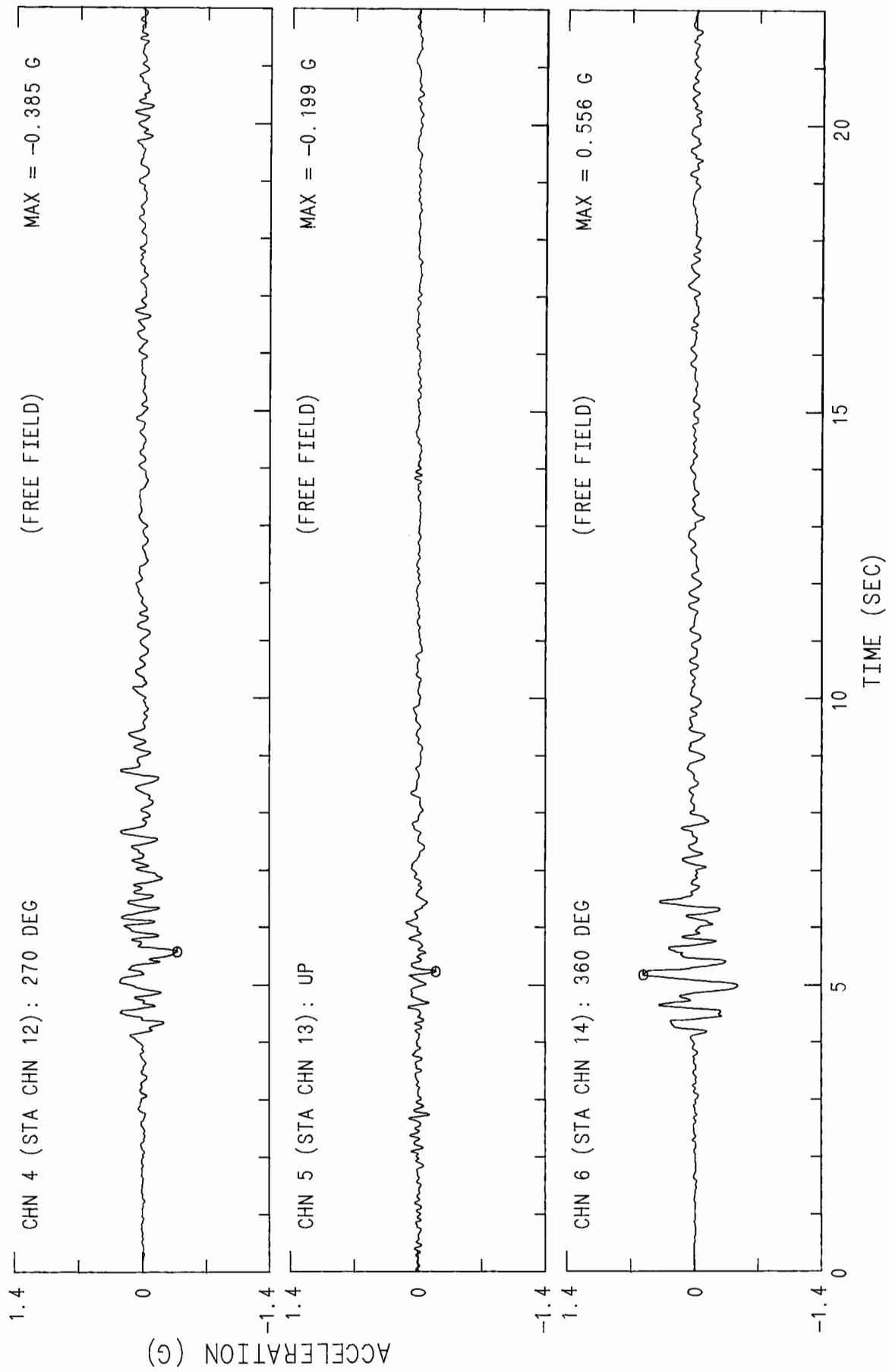
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
RIO DELL - 101/PINTER ST. OVERPASS
UNCORRECTED ACCELERограм 89324-C0161-92118.04 113072.1143-QP92A324



CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS
 UNCORRECTED ACCELERPROGRAM 89324-C0138-92118.04 113072.0837-QP92A324C2



CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
RIO DELL - 101/PINTNER ST. OVERPASS
UNCORRECTED ACCELERogram 89324-C0138-921118.04 113072.0837-QP92A324C2



CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PINTER ST. OVERPASS

UNCORRECTED ACCELERPROGRAM 89324-C0138-92118.04 113072.0837-QP92A32C2

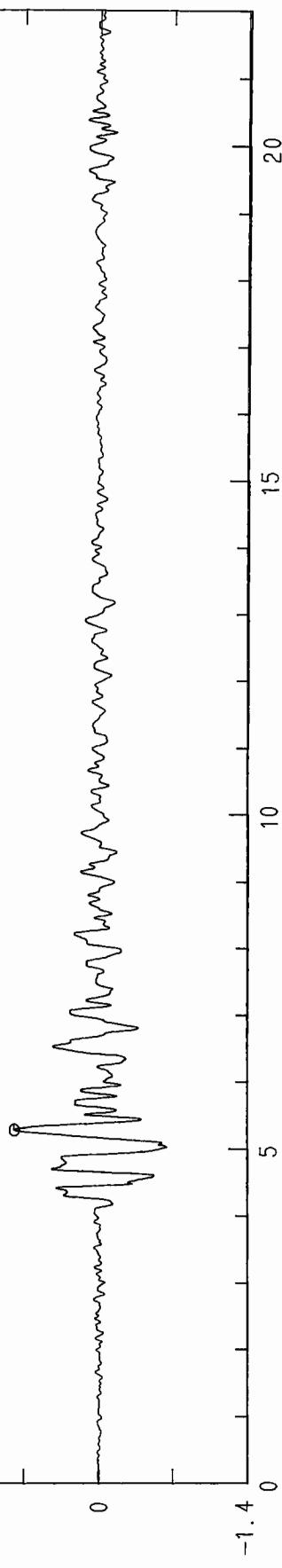
1.4 CHN 7 (STA CHN 15) : 270 DEG (ON GROUND NEAR EAST ABUTMENT) MAX = -0.453 G



1.4 CHN 8 (STA CHN 16) : UP (ON GROUND NEAR EAST ABUTMENT) MAX = 0.211 G



1.4 CHN 9 (STA CHN 17) : 360 DEG (ON GROUND NEAR EAST ABUTMENT) MAX = 0.783 G



ACCELERATION (G)

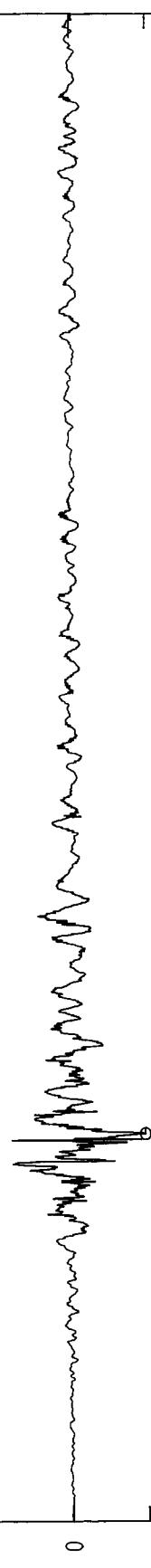
TIME (SEC)

CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PINTNER ST. OVERPASS

UNCORRECTED ACCELERGRAM 89324-C0138-92118.04 113072.0837-QP92A324C2

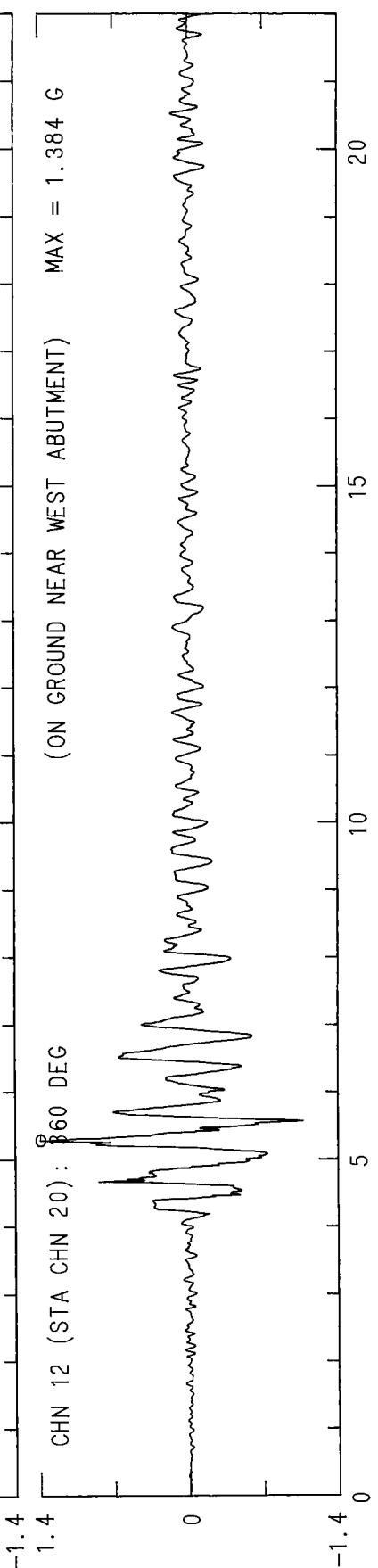
1.4 CHN 10 (STA CHN 18): 270 DEG

(ON GROUND NEAR WEST ABUTMENT) MAX = -0.689 G



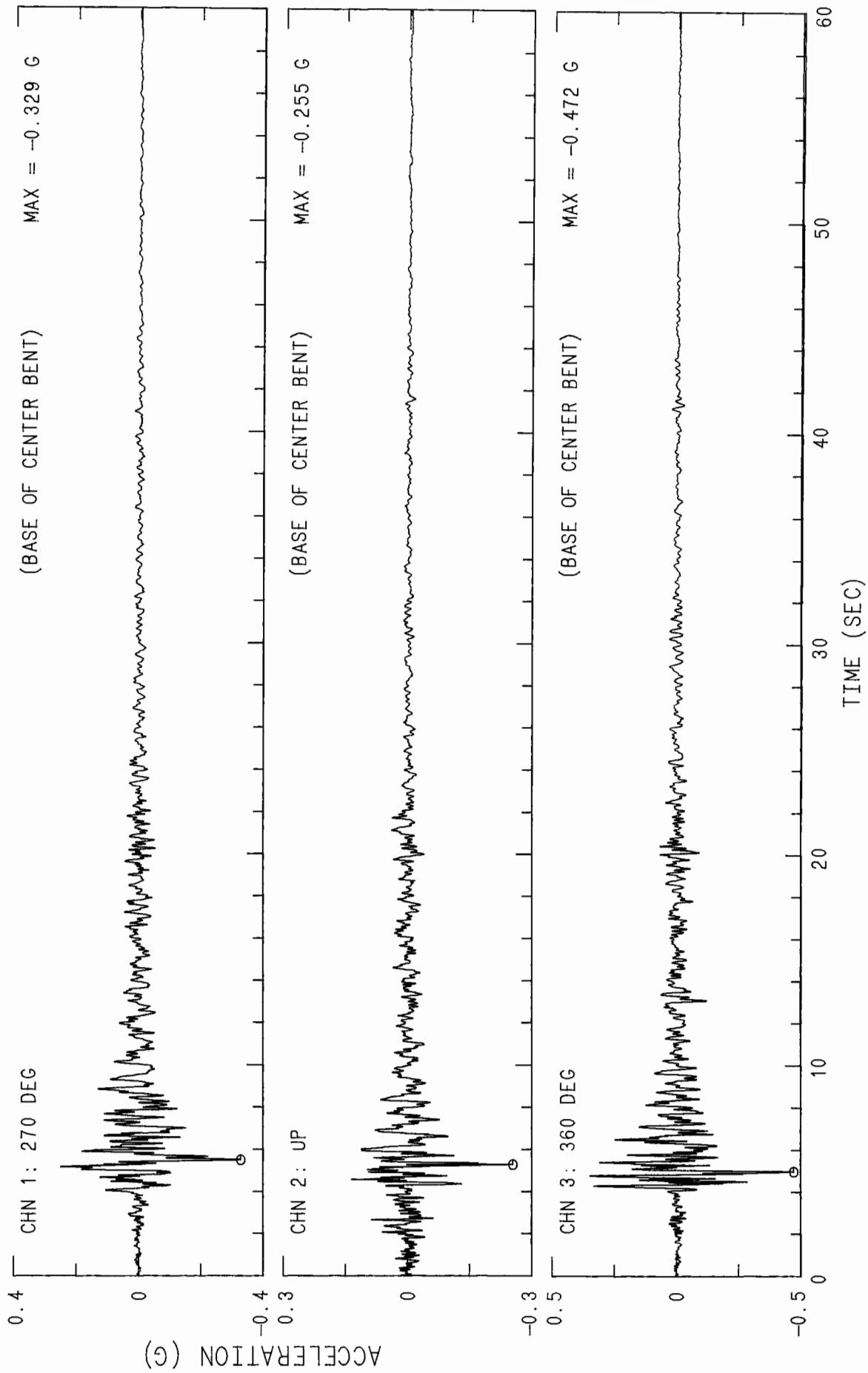
1.4 CHN 11 (STA CHN 19): UP

(ON GROUND NEAR WEST ABUTMENT) MAX = -0.433 G

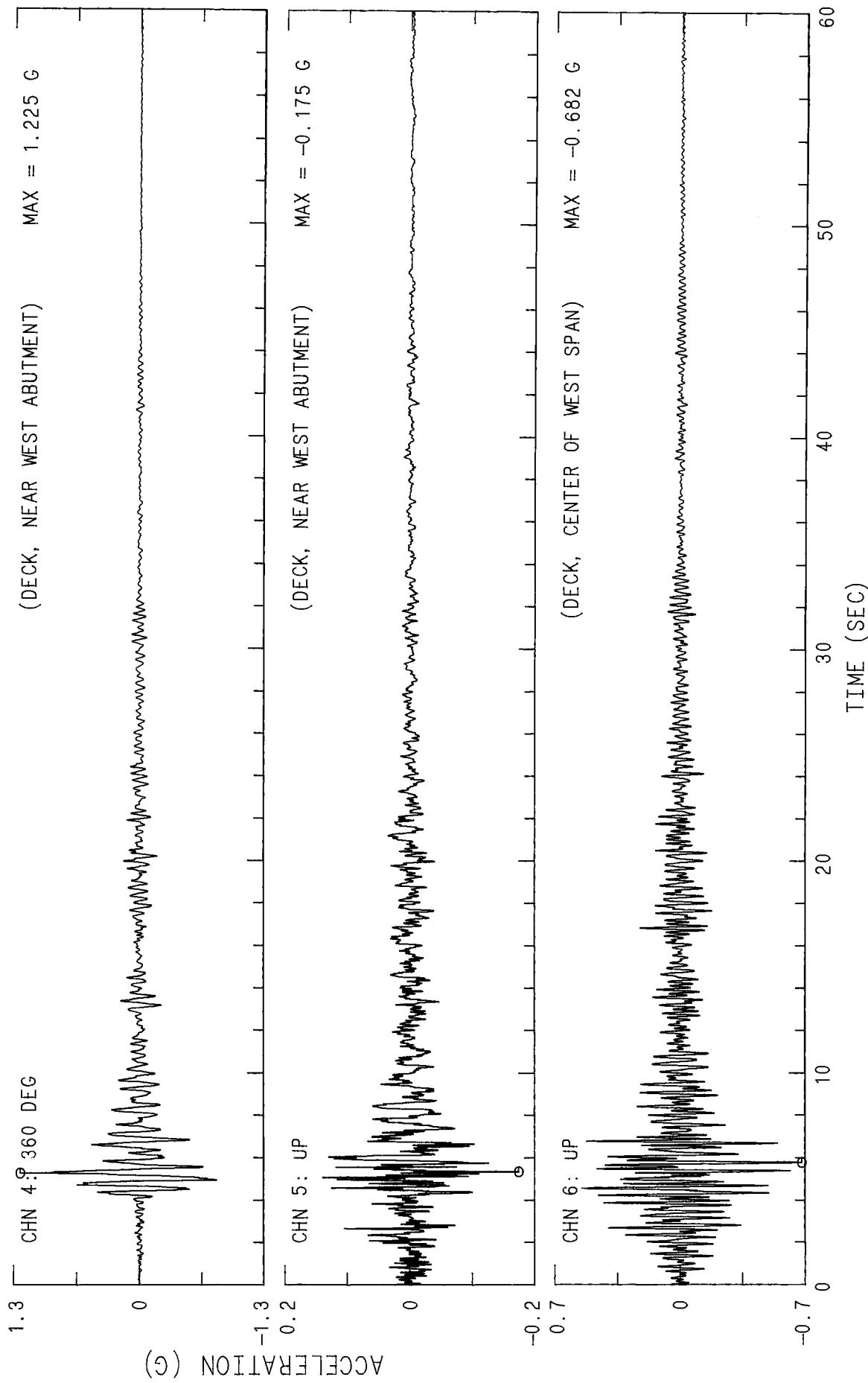


ACCELERATION (G)

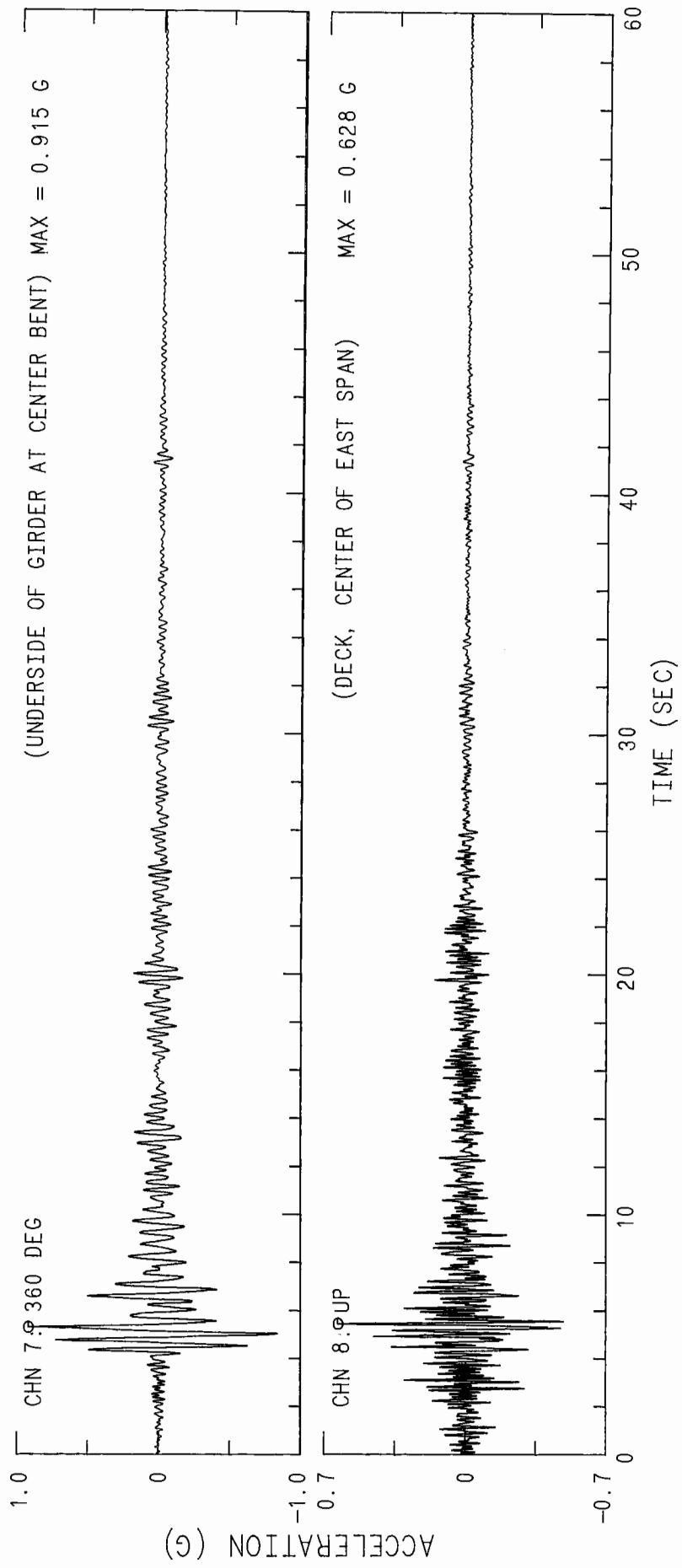
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS
 UNCORRECTED ACCELERPROGRAM 89324-C0161-92118.04 113072.1143-QP92A324



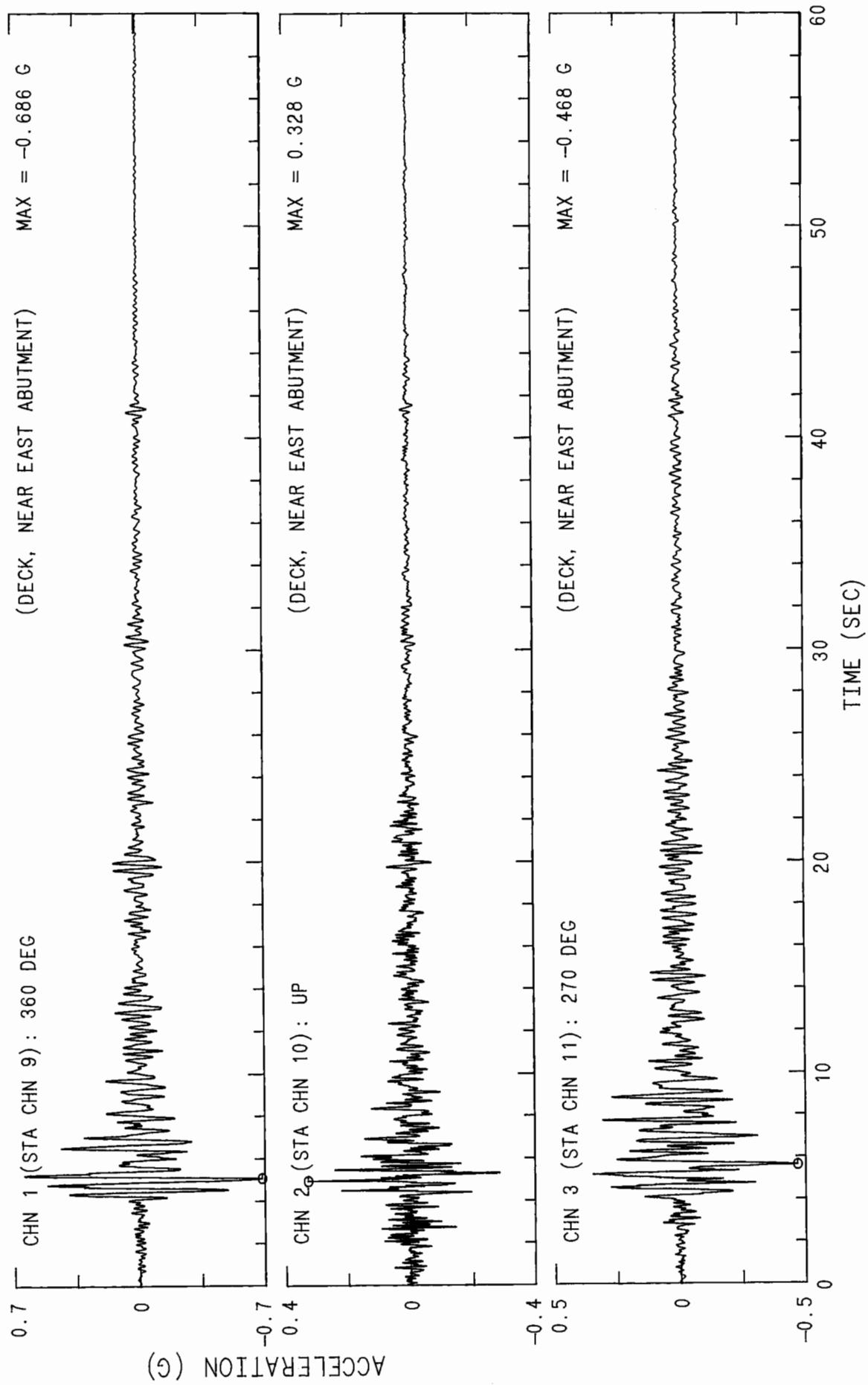
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS
 UNCORRECTED ACCELERPROGRAM 88324-C0161-92118.04 113072.1143-QP92A324



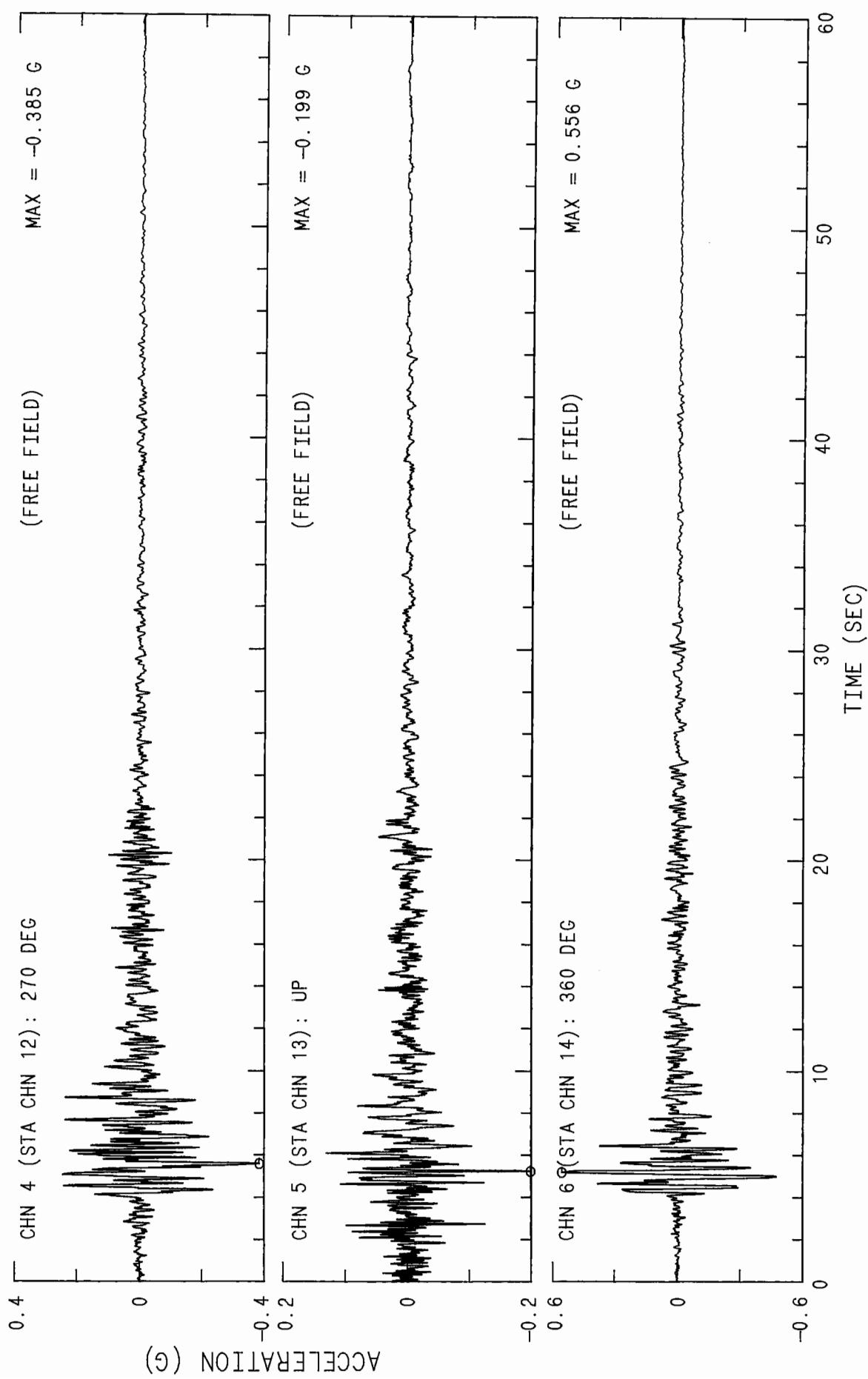
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
RIO DELL - 101/PAINTER ST. OVERPASS
UNCORRECTED ACCELERPROGRAM 89324-C0161-92118.04 113072.1143-QP92A324



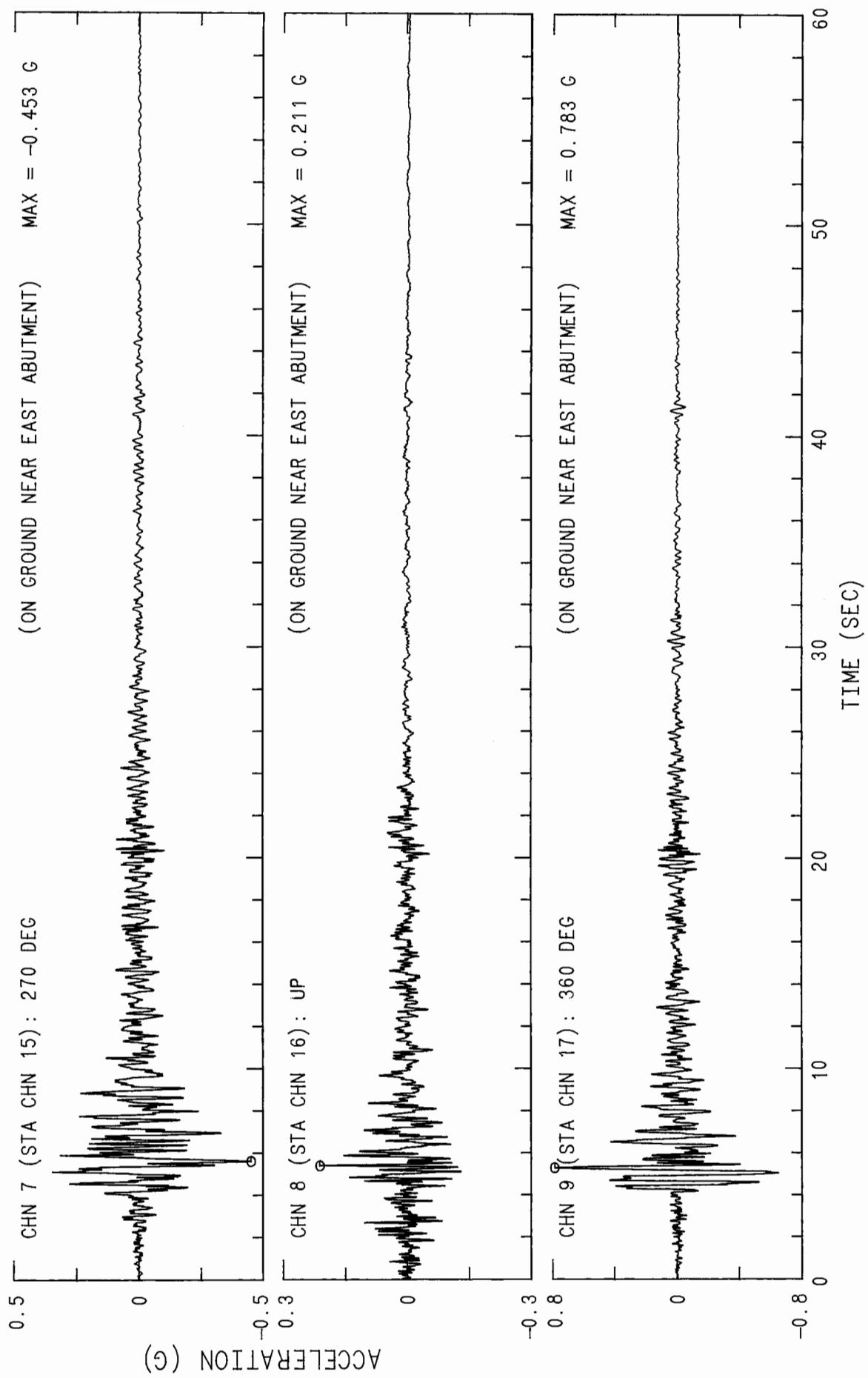
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL – 101/PAINTER ST. OVERPASS
 UNCORRECTED ACCELEROMGRAM 89324-C0138-92118.04 113072.0837-QP92A324C2



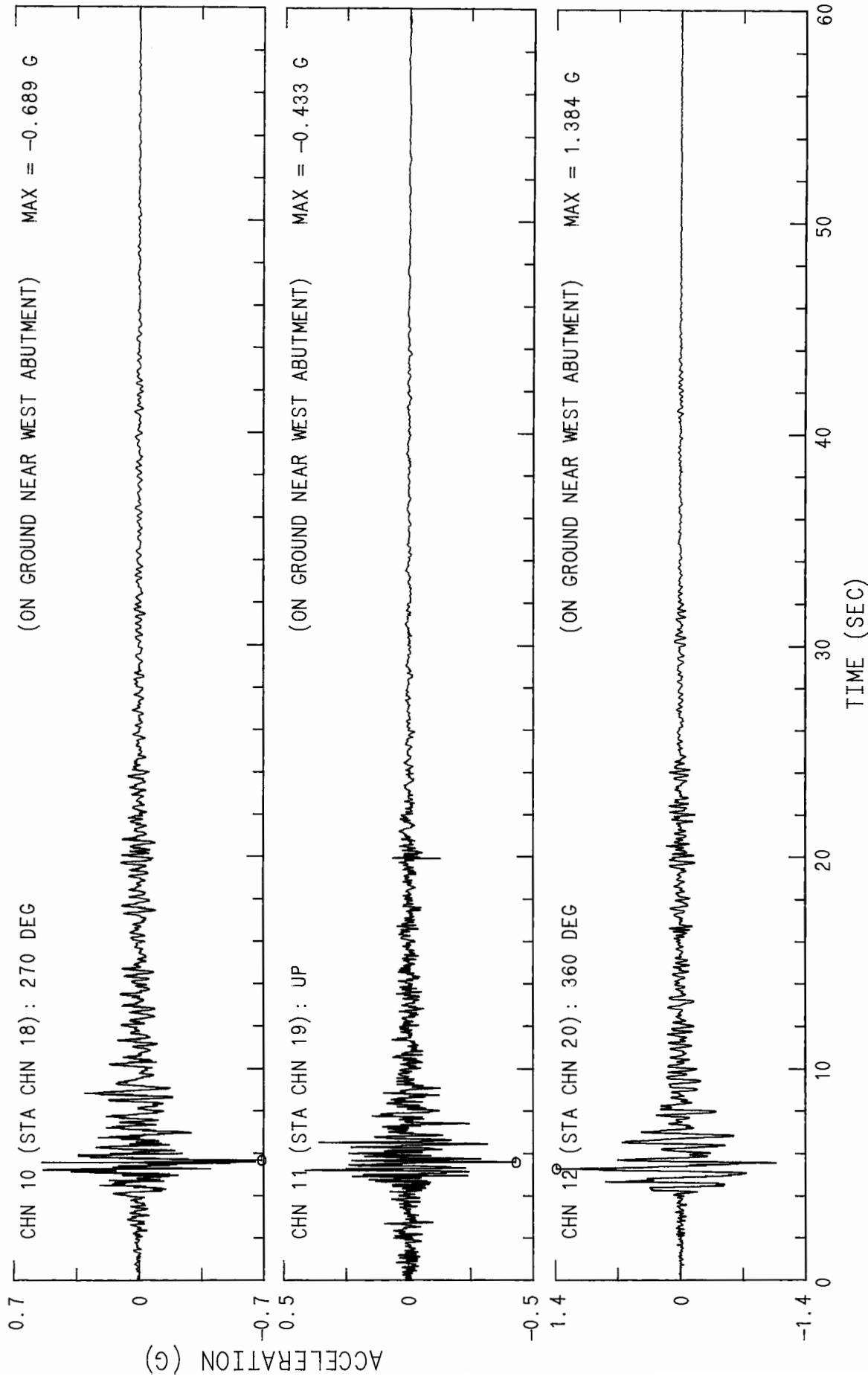
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS
 UNCORRECTED ACCELERPROGRAM 89324-C0138-92118.04 113072.0837-QP92A324C2



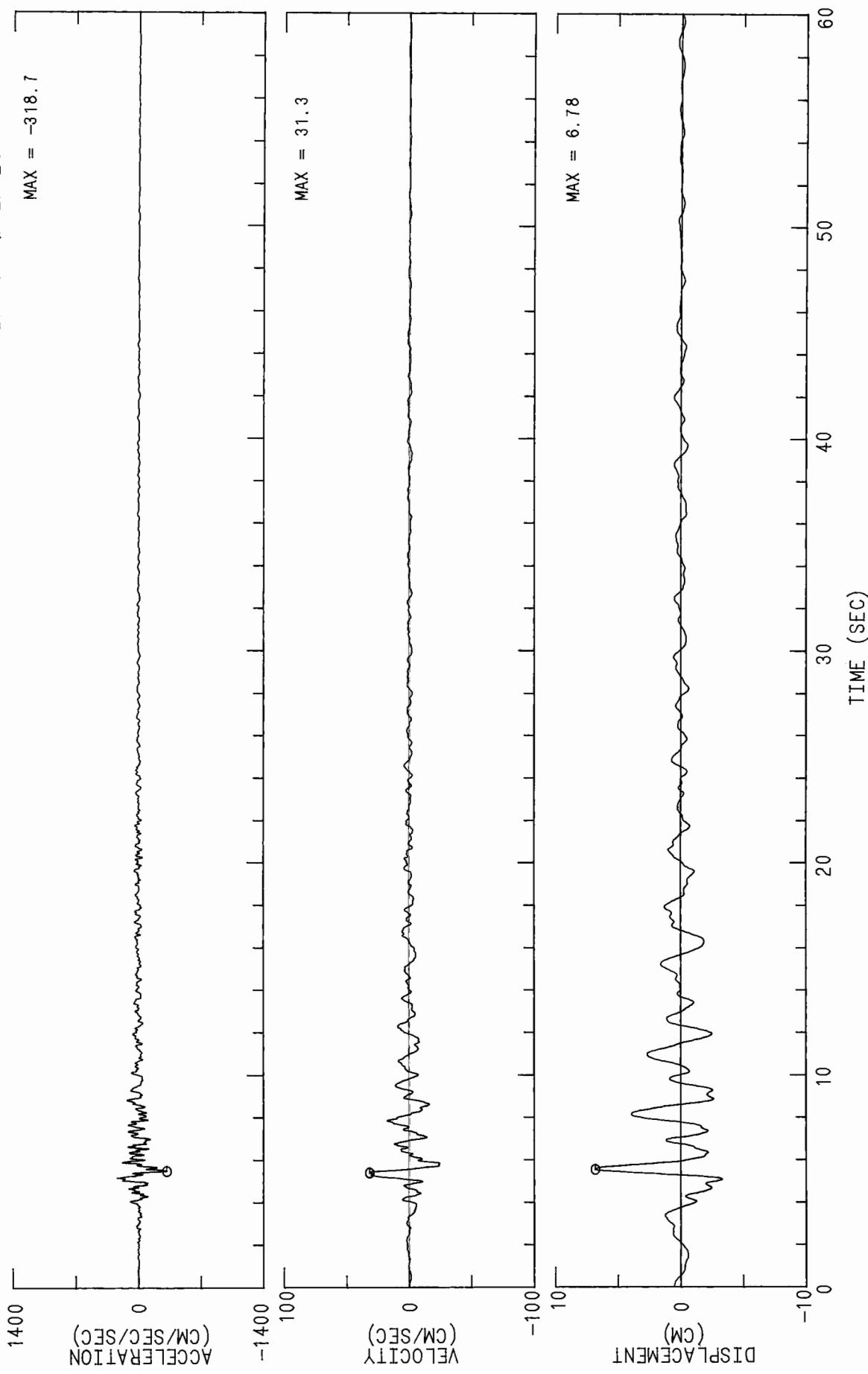
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS
 UNCORRECTED ACCELERPROGRAM 89324-C0138-92118.04 113072.0837-QP92A324C2



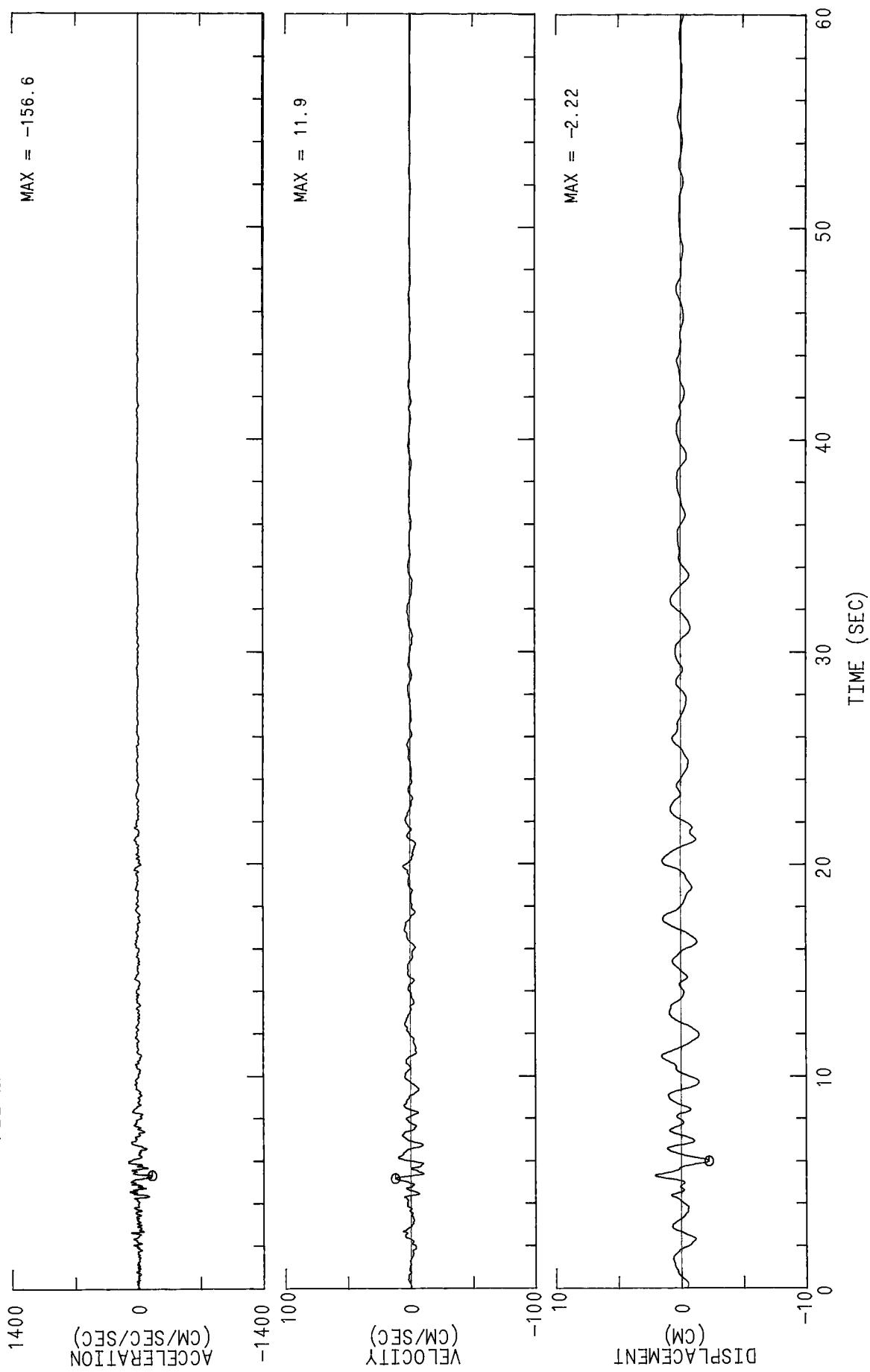
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS
 UNCORRECTED ACCELERGRAM 89324-C0138-92118.04 113072.0837-QP92A324C2



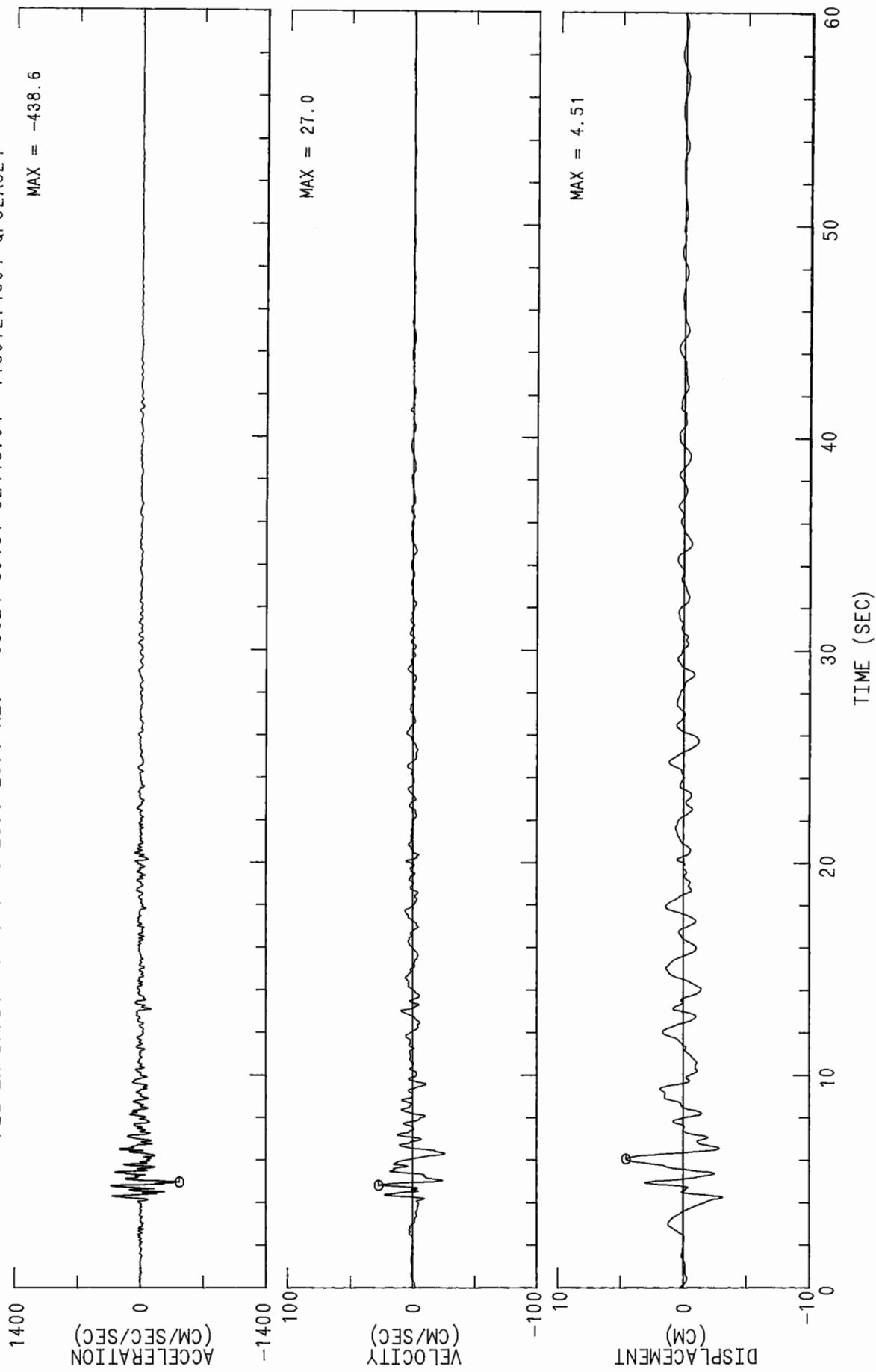
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS CHN 1: 270 DEG (BASE OF CENTER BENT)
 INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
 FILTER BAND: 15-. 30 TO 23. 0-25. 0 HZ. 89324-C0161-92118.04 113072.1301-QP92A324



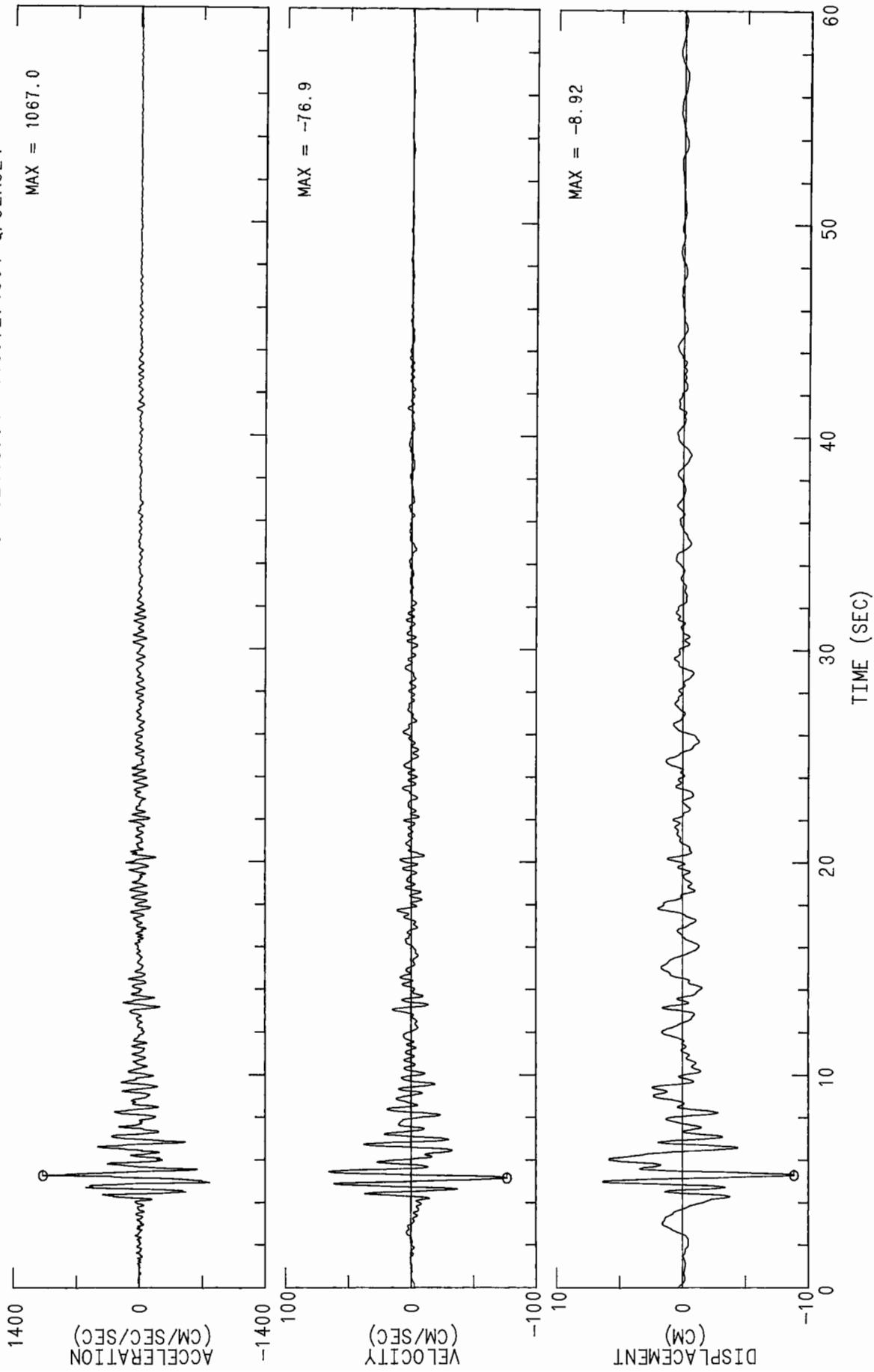
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS CHN 2: UP (BASE OF CENTER BENT)
 INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
 FILTER BAND: 15-.30 TO 23.0-25.0 HZ. 89324-C0161-92118.04 113072.1301-QP92A324



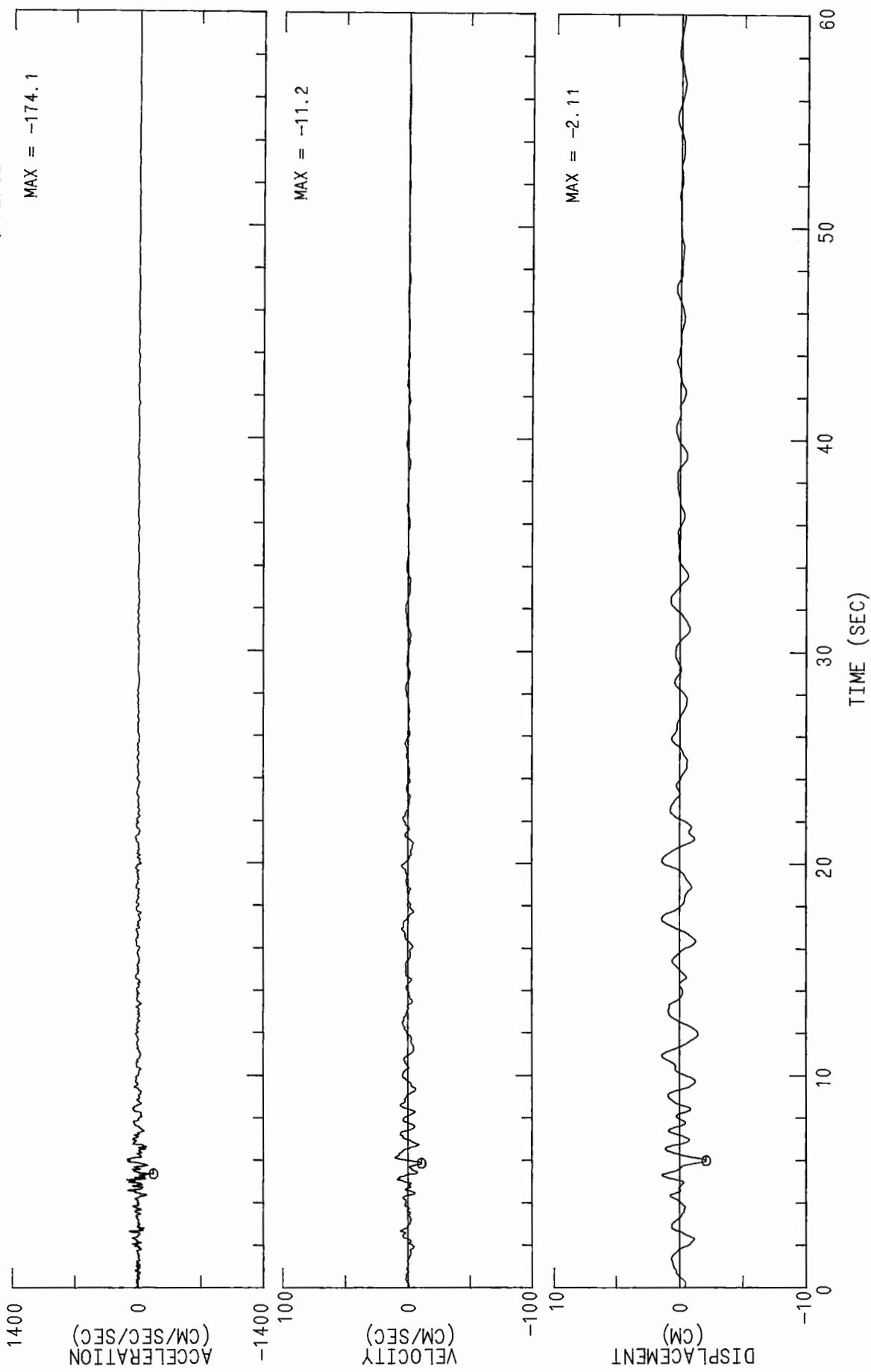
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELLE - 101/PAINTER ST. OVERPASS CHN 3: 360 DEG (BASE OF CENTER BENT)
 INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
 FILTER BAND: .15-.30 TO 23.0-25.0 HZ. 89324-C0161-92118.04 113072.1301-QP92A324



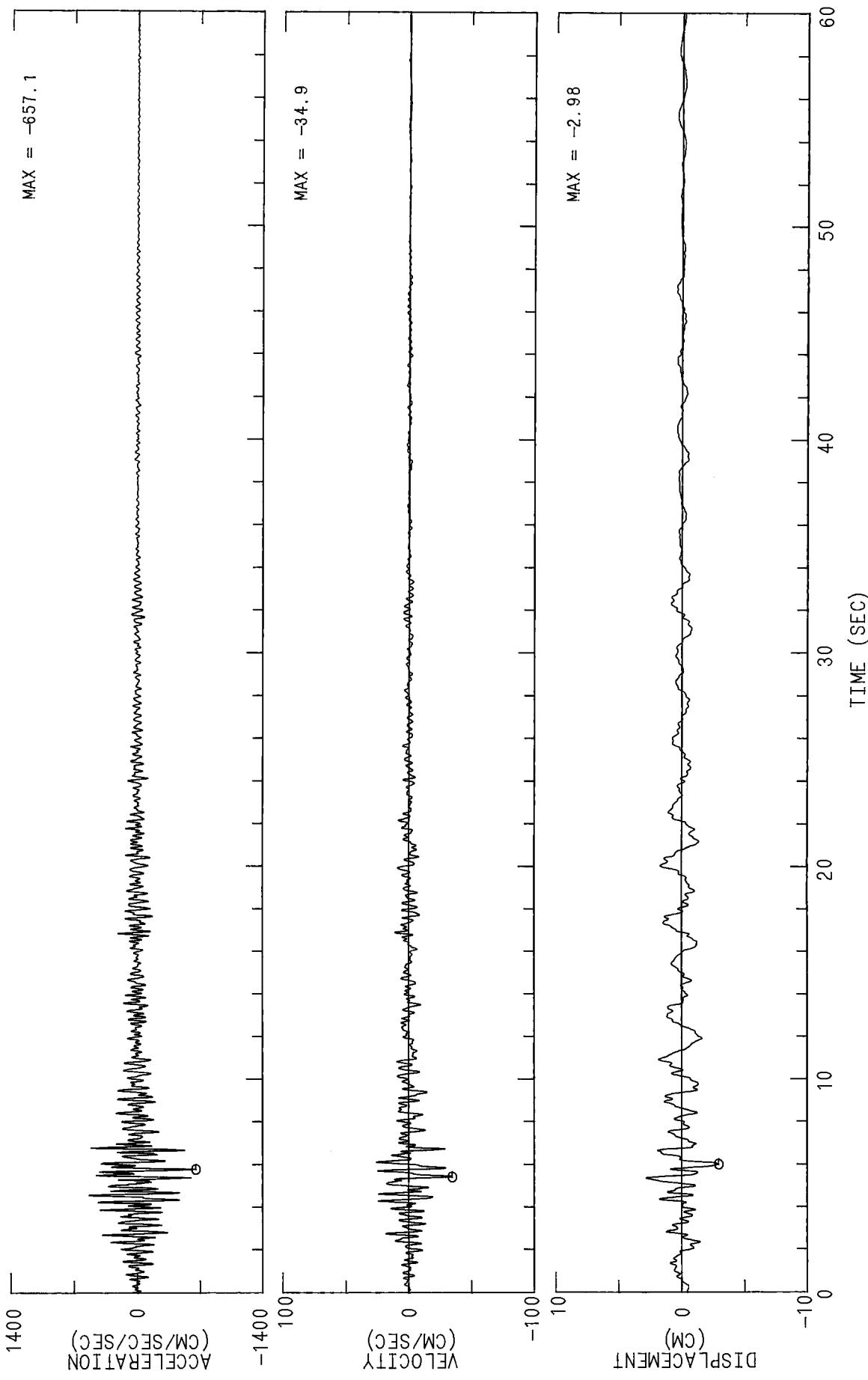
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS CHN 4: 360 DEG (DECK, NEAR WEST ABUTMENT)
 INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
 FILTER BAND: .15-.30 TO 23.0-25.0 HZ. 88324-c0161-92118.04 113072.1301-QP92A324



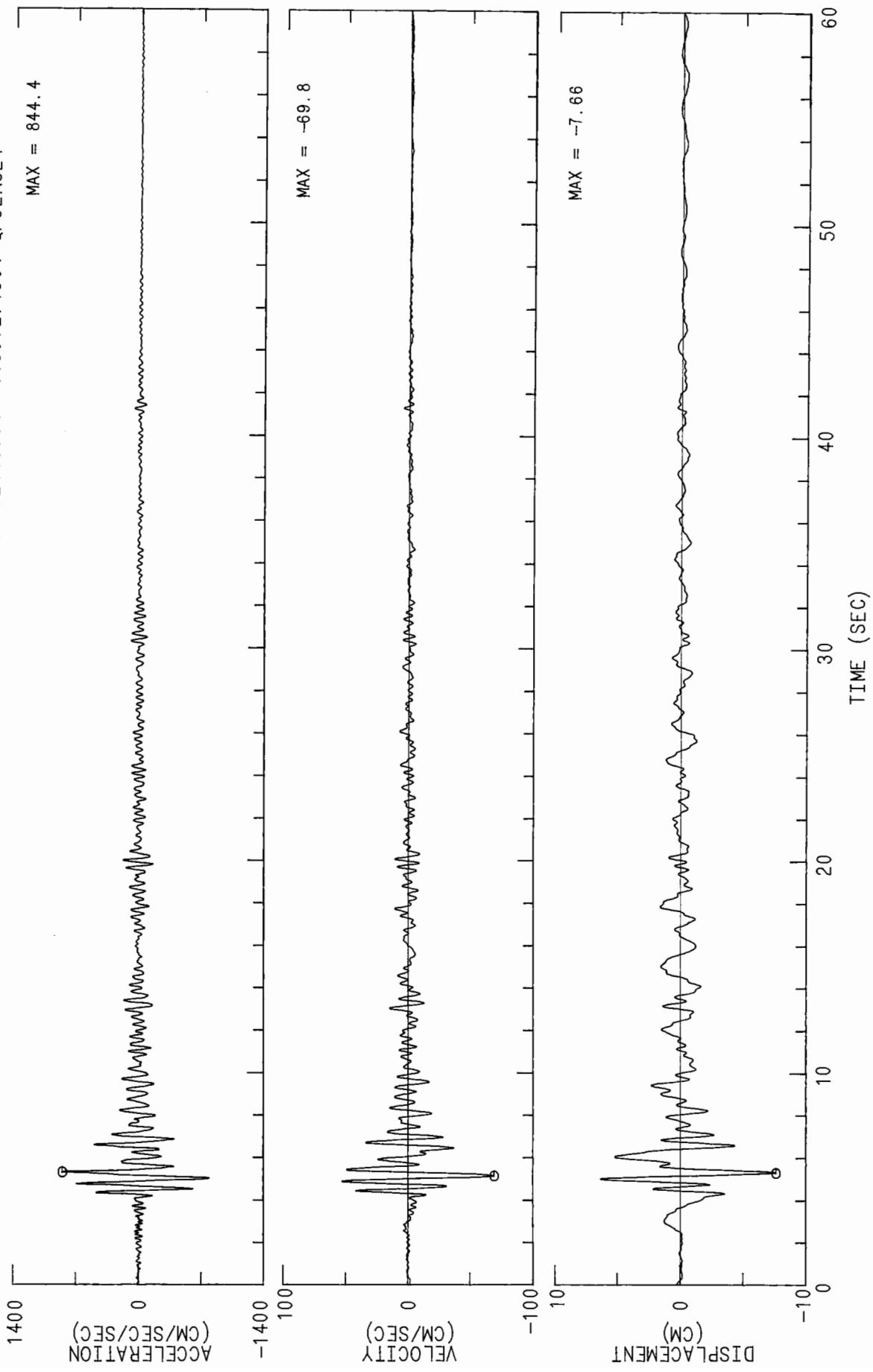
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELI - 101/PAINTER ST. OVERPASS CHN 5: UP (DECK, NEAR WEST ABUTMENT)
 INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
 FILTER BAND: .15-.30 TO 23.0-25.0 Hz. 89324-C0161-92118.04 113072.1301-QP92A324



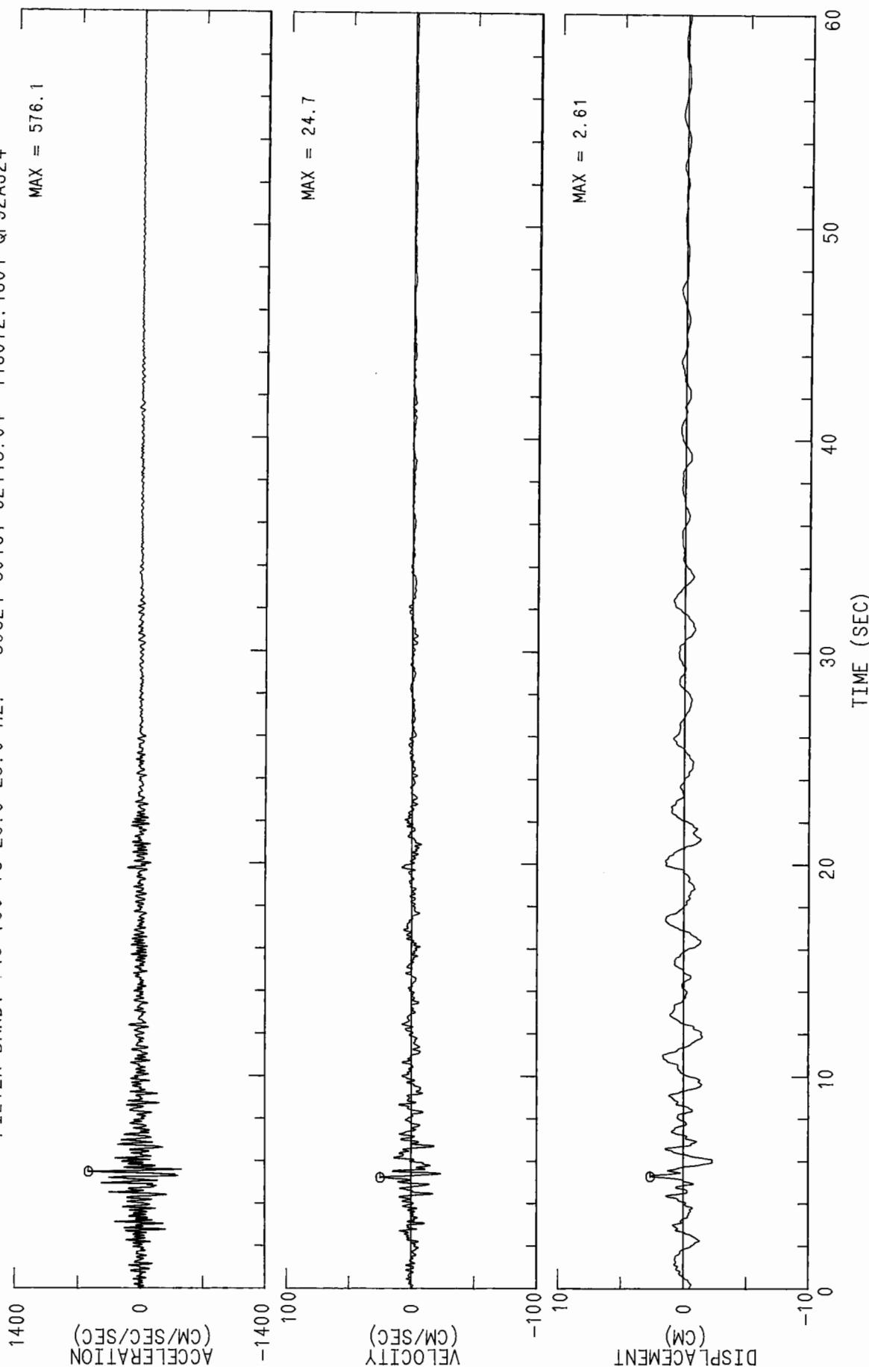
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS CHN 6: UP (DECK, CENTER OF WEST SPAN)
 INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
 FILTER BAND: .15-.30 TO 23.0-25.0 HZ. 89324-C0161-92118.04 113072.1301-QP92A324



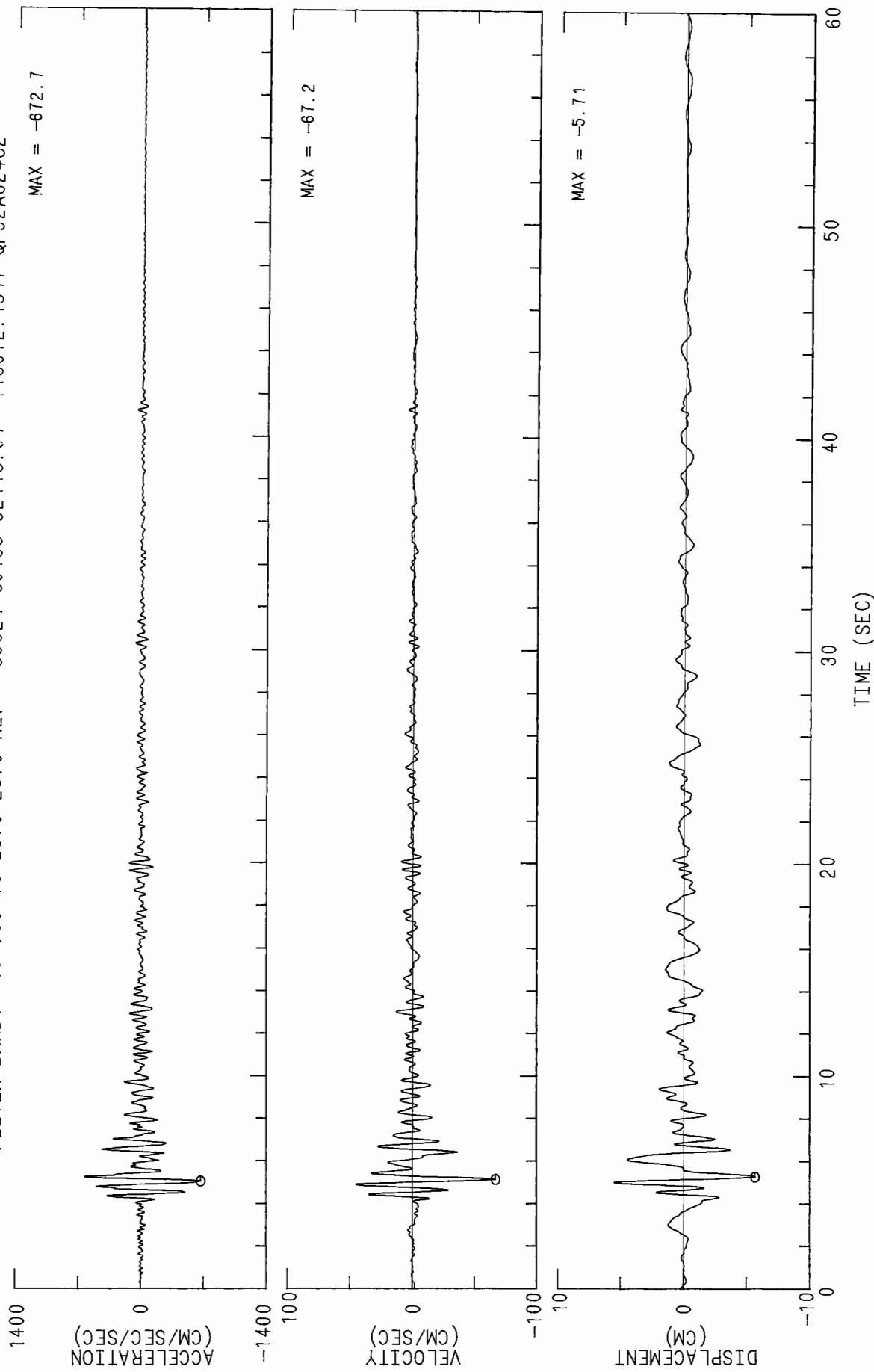
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELLA - 101/PINTNER ST. OVERPASS CHN 7: 360 DEG (UNDERSIDE OF GIRDER AT CENTER BENT)
 INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
 FILTER BAND: 15-.30 TO 23.0-25.0 HZ. 89324-C0161-92118.04 113072.1301-QP92A324



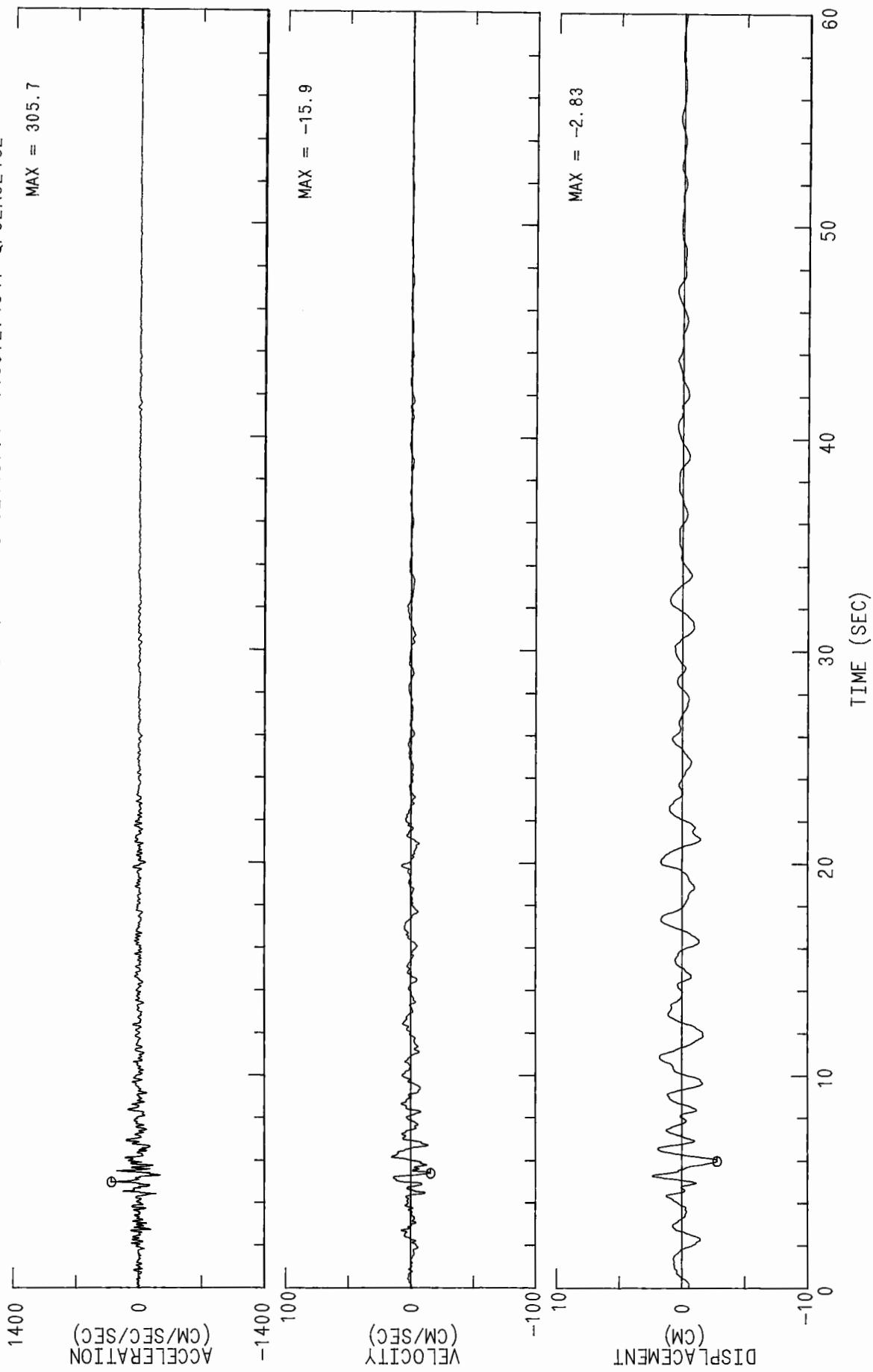
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELLA — 101/PAINTER ST. OVERPASS CHN 8: UP (DECK, CENTER OF EAST SPAN)
 INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
 FILTER BAND: .15-., 30 TO 23.0-25.0 HZ. 89324-C0161-92118.04 113072.1301-QP92A324



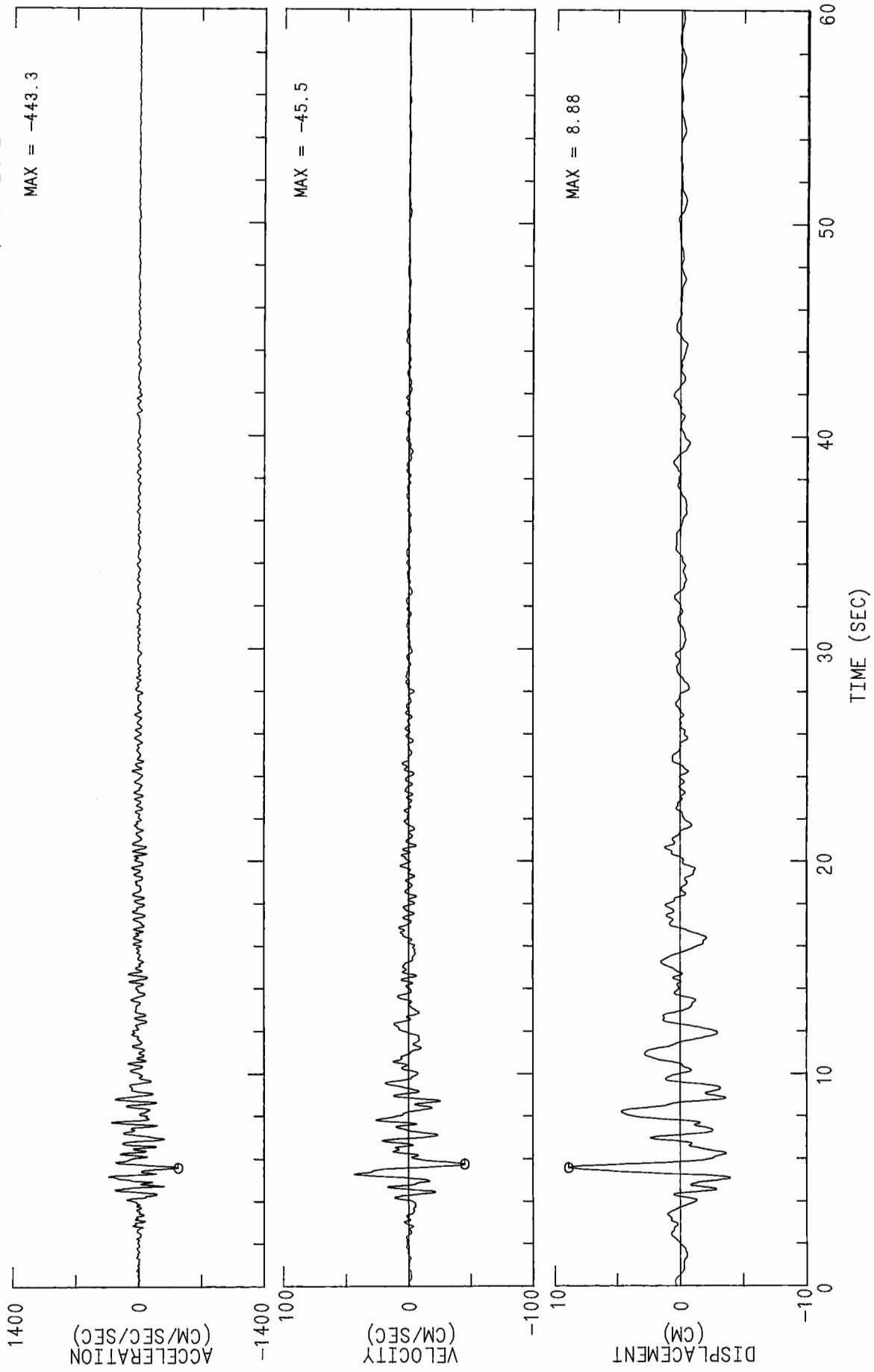
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS CHN 1 (STA CHN 9): 360 DEG (DECK, NEAR EAST ABUTMENT)
 INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
 FILTER BAND: 15-.30 TO 23.0-25.0 HZ. 89324-C0138-92118.04 113072.1547-QP92A324C2



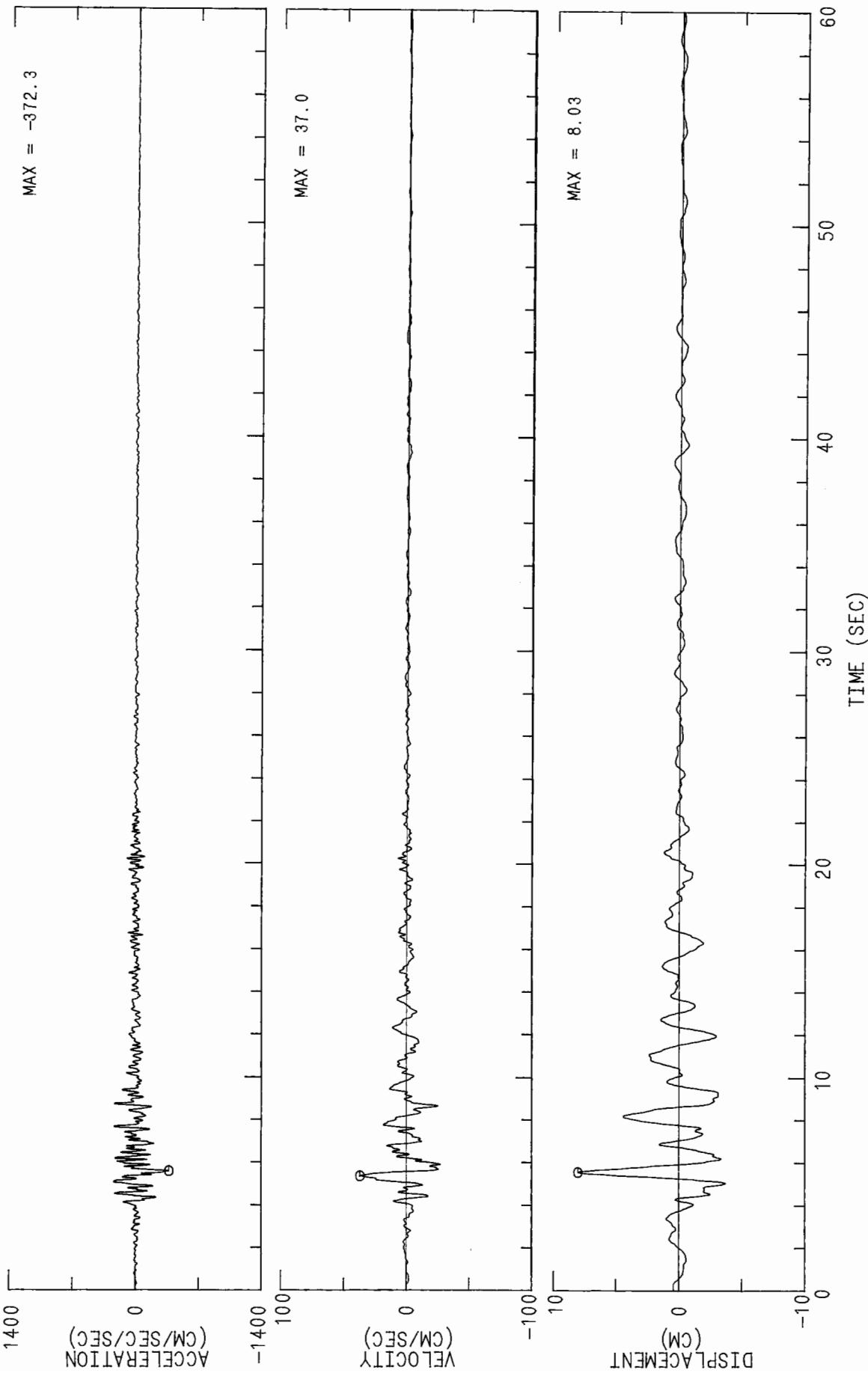
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS CHN 2 (STA CHN 10) : UP (DECK, NEAR EAST ABUTMENT)
 INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
 FILTER BAND: .15-.30 TO 23.0-25.0 Hz. 89324-C0138-92118.04 113072.1547-QP92A324C2



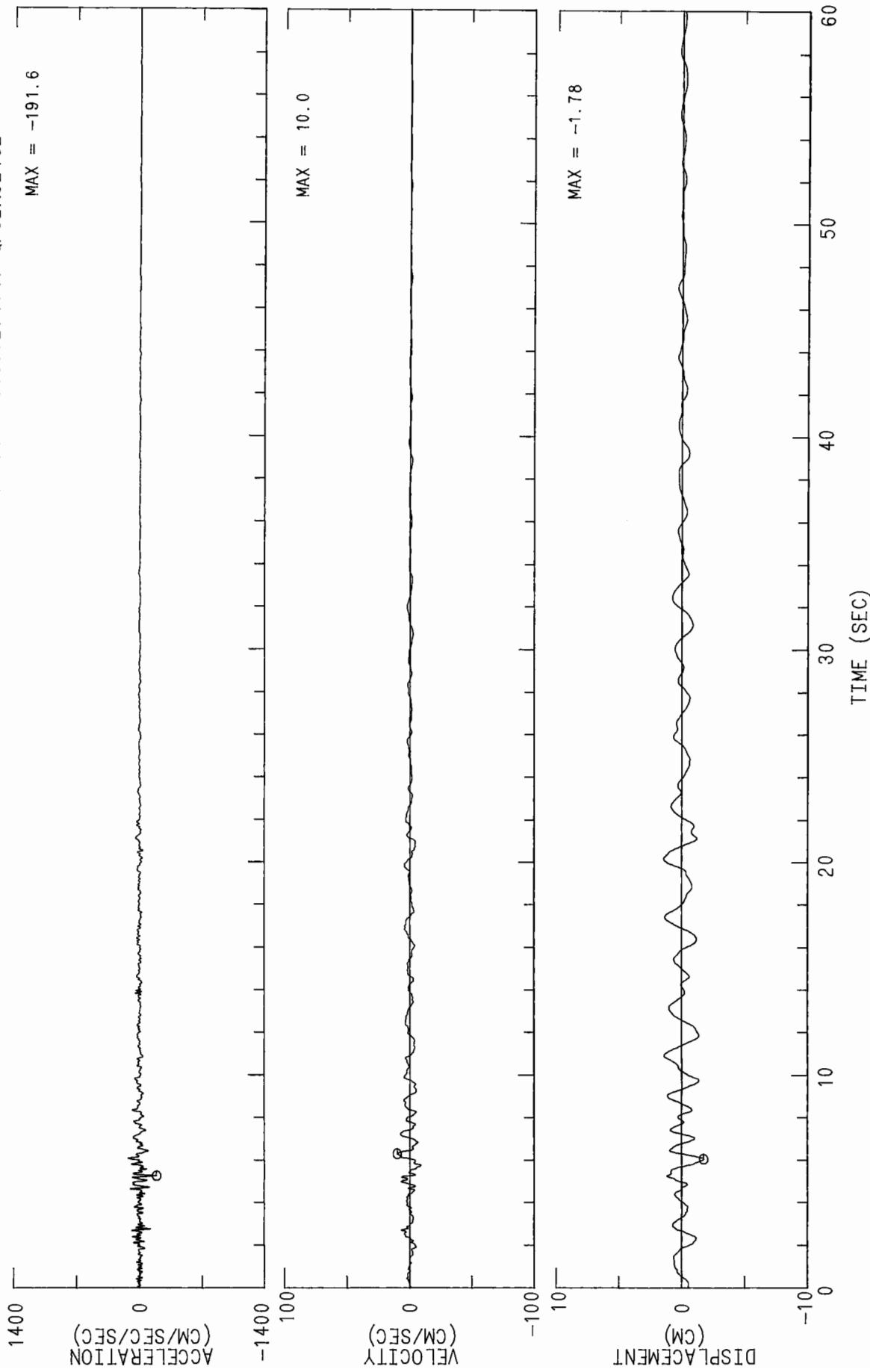
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELI - 101/PAINTER ST. OVERPASS CHN 3 (STA CHN 11); 270 DEG (DECK, NEAR EAST ABUTMENT)
 INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
 FILTER BAND: 15-.30 TO 23.0-25.0 HZ. 89324-C0138-92118.04 113072.1547-QP92A324C2



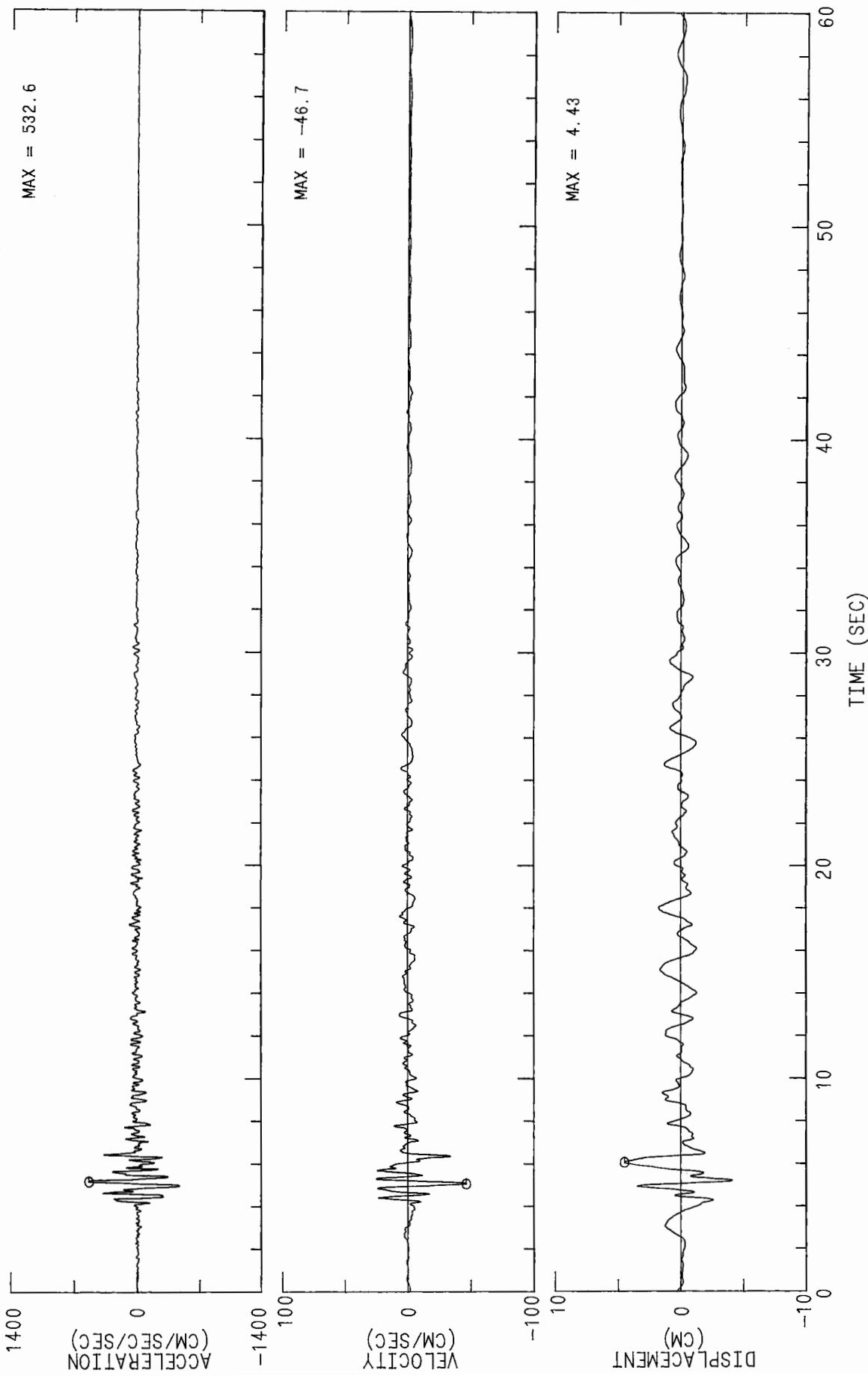
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELLA = 101/PAINTER ST. OVERPASS CHN 4 (STA CHN 12) : 270 DEG (FREE FIELD)
 INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
 FILTER BAND: 15-.30 TO 23.0-25.0 HZ. 89324-C0138-92118.04 113072. 1547-QP92A324C2



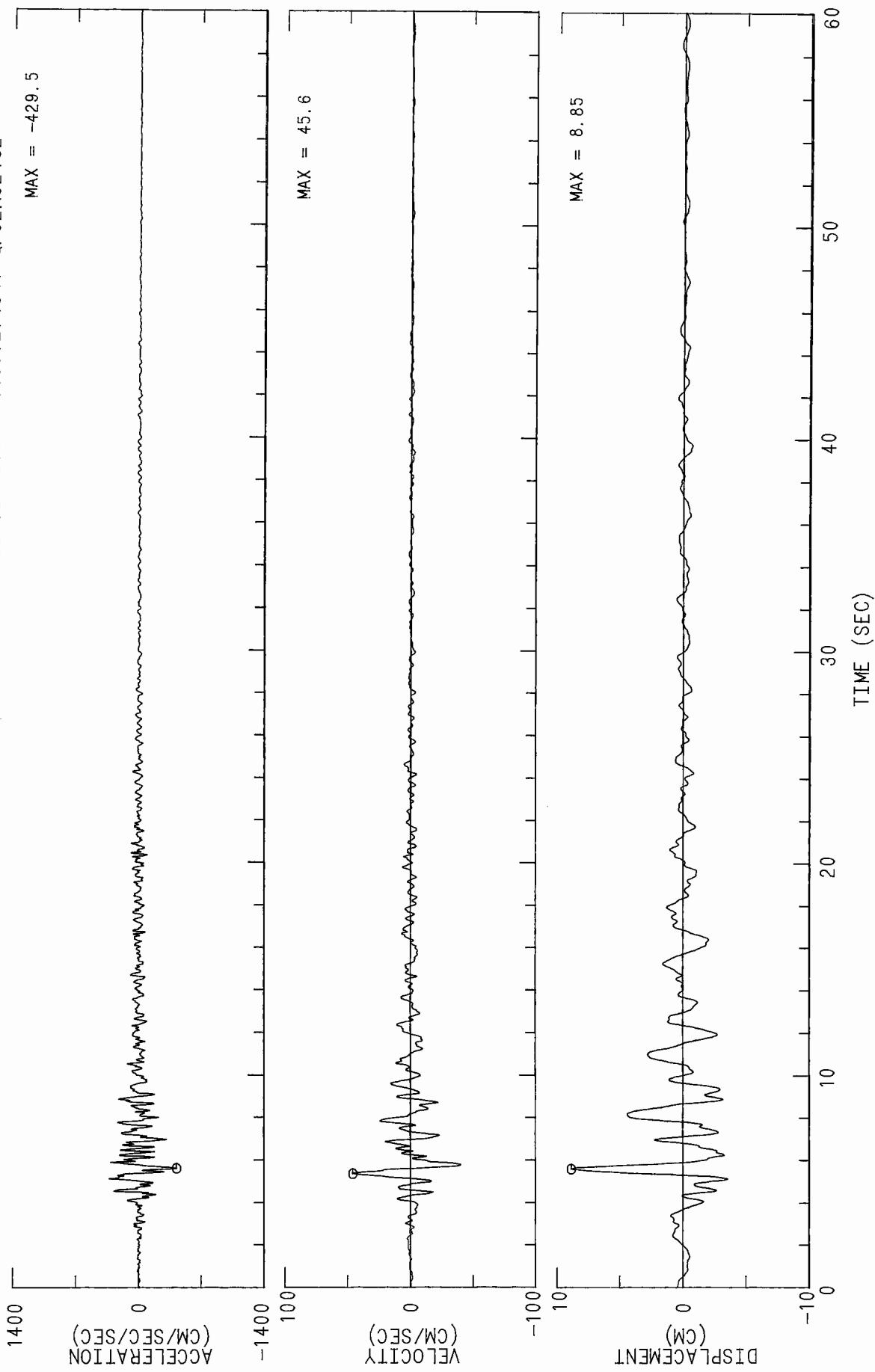
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS CHN 5 (STA CHN 13) : UP (FREE FIELD)
 INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
 FILTER BAND: .15-.30 TO 23.0-25.0 Hz. 89324-C0138-92118.04 113072.1547-QP92A324C2



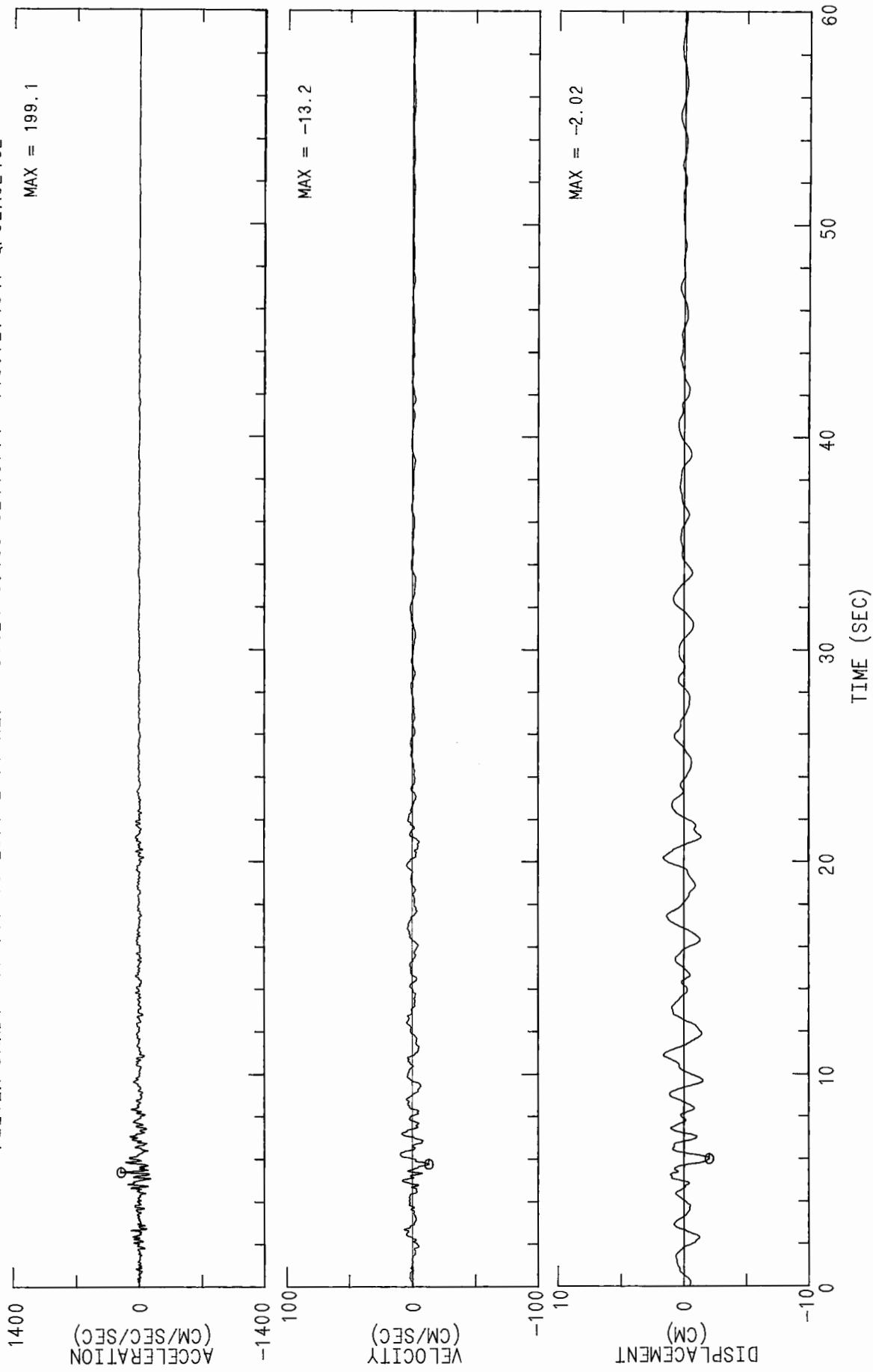
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PINTNER ST. OVERPASS CHN 6 (STA CHN 14): 360 DEG (FREE FIELD)
 INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
 FILTER BAND: .15-.30 TO 23.0-25.0 Hz. 89324-C0138-92118.04 113072.1547-QP92A324C2

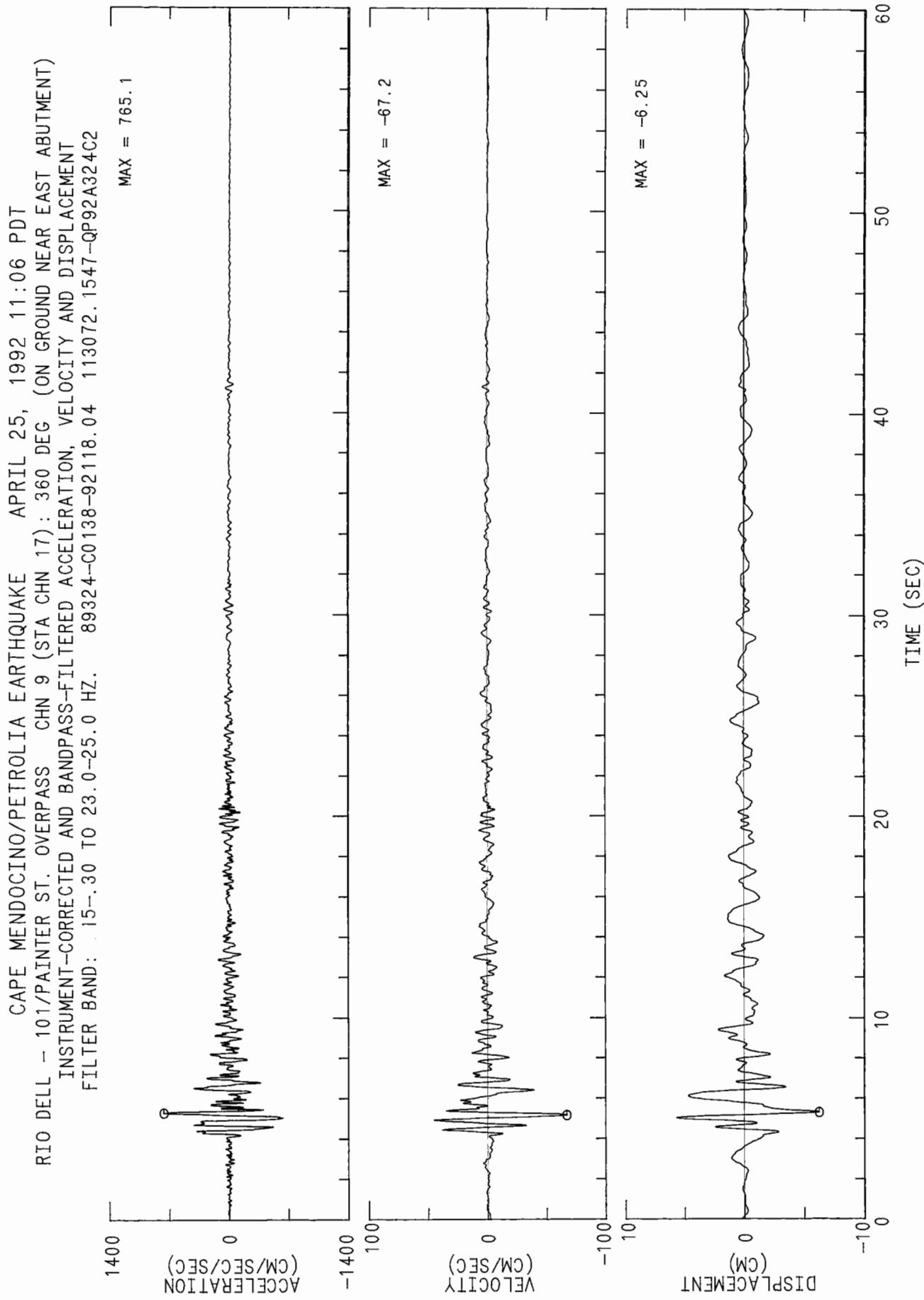


CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS CHN 7 (STA CHN 15): 270 DEG (ON GROUND NEAR EAST ABUTMENT)
 INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
 FILTER BAND: .15-.30 TO 23.0-25.0 Hz. 89324-C0138-92118.04 113072.1547-QP92A324C2

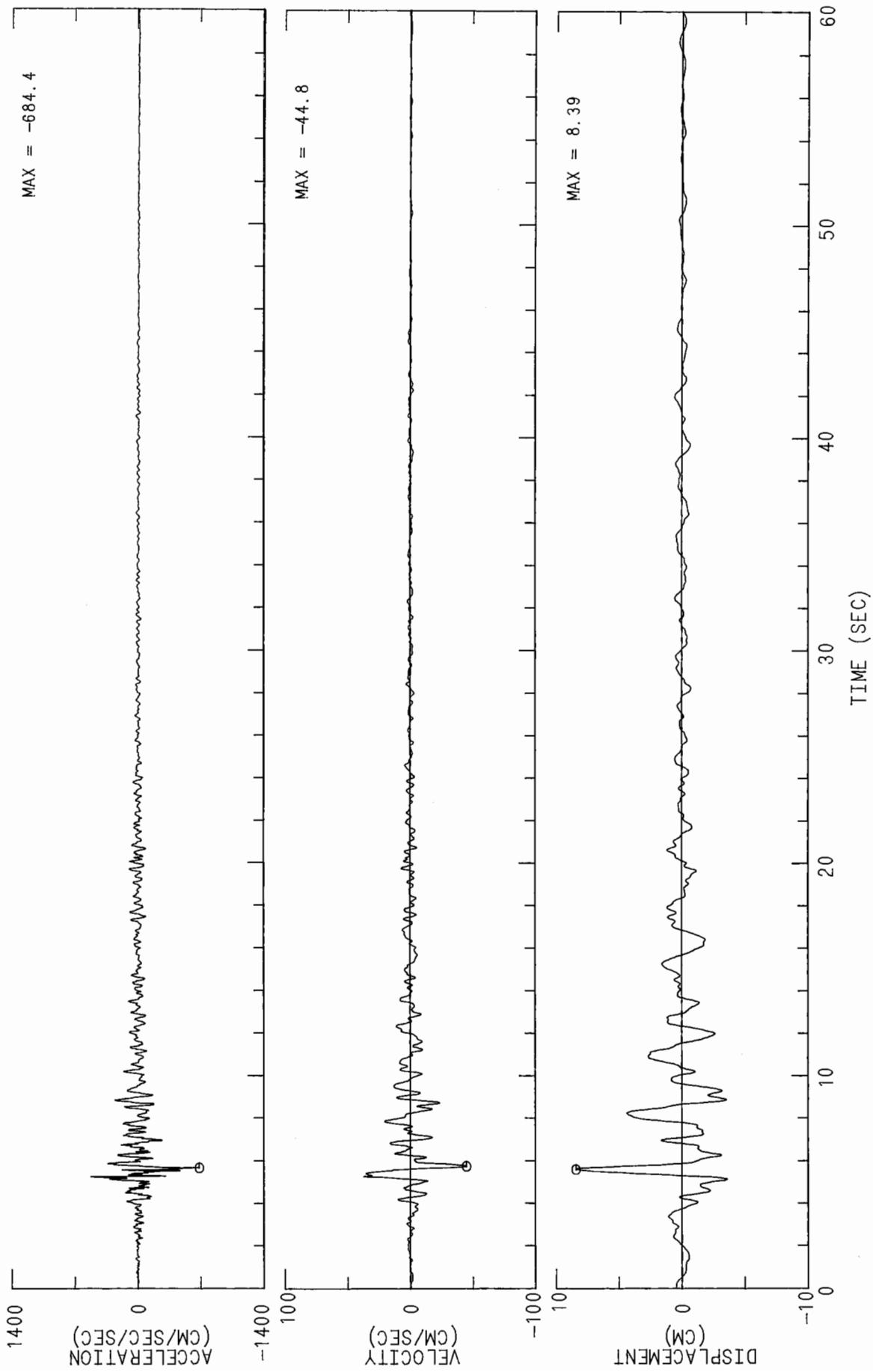


CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS CHN 8 (STA CHN 16): UP (ON GROUND NEAR EAST ABUTMENT)
 INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
 FILTER BAND: .15-.30 TO 23.0-25.0 HZ. 89324-C0138-92118.04 113072.1547-QP92A324C2

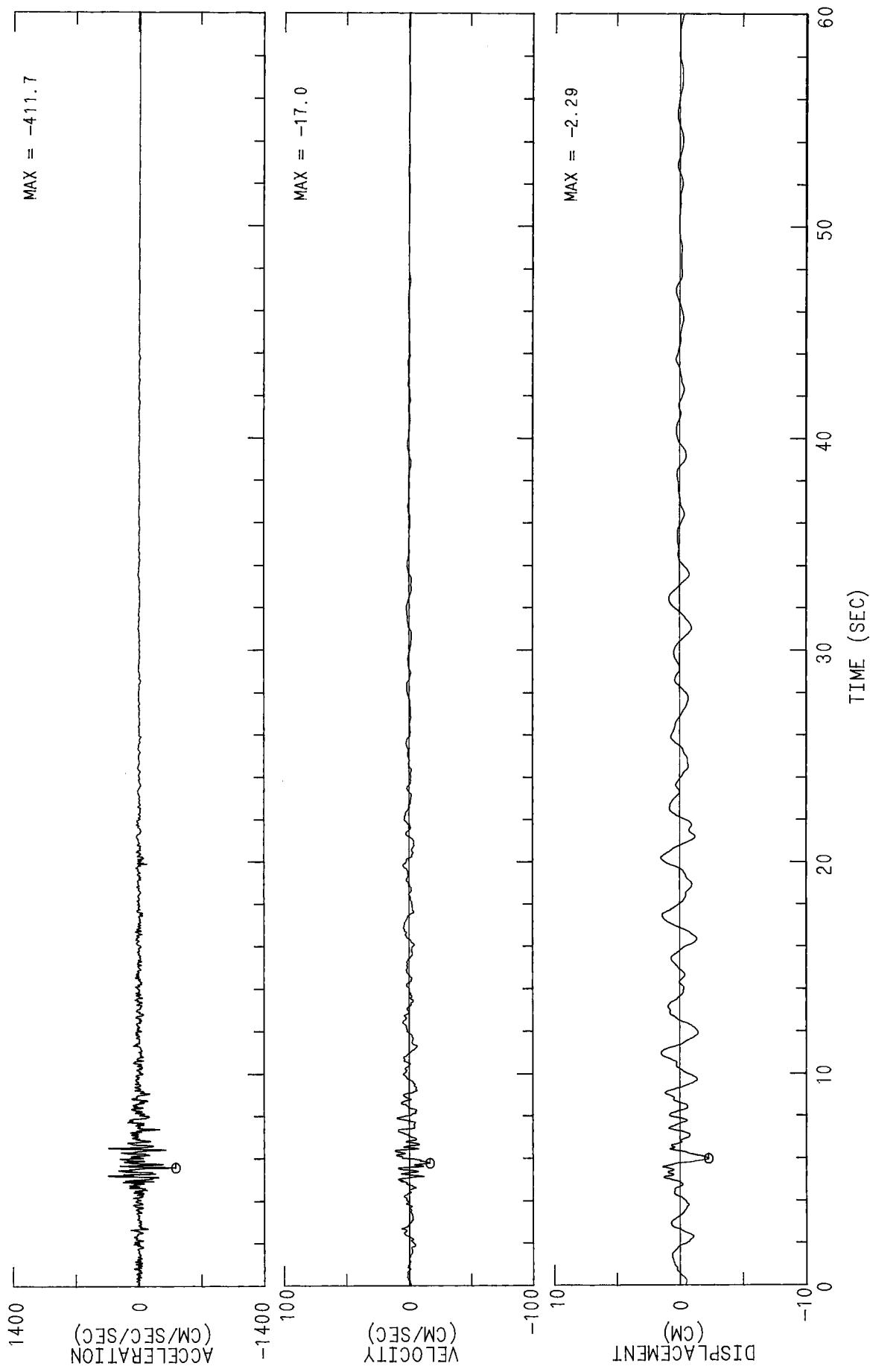




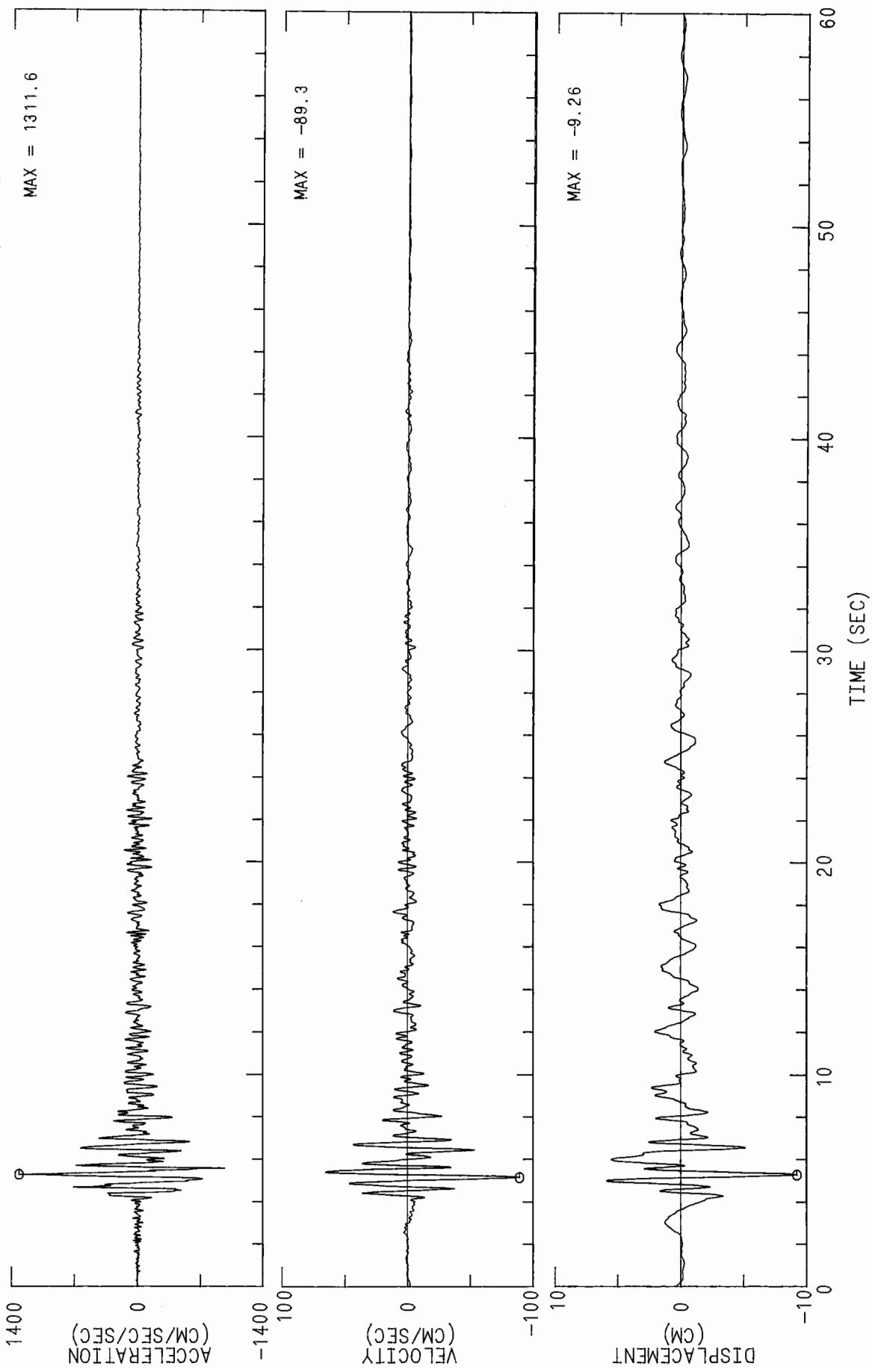
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELTA - 101/PAINTER ST. OVERPASS CHN 10 (STA CHN 18): 270 DEG (ON GROUND NEAR WEST ABUTMENT)
 INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
 FILTER BAND: 15-, .30 TO 23.0-25.0 Hz. 89324-C0138-92118.04 113072.1547-QP92A324C2



CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS CHN 11 (STA CHN 19): UP (ON GROUND NEAR WEST ABUTMENT)
 INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
 FILTER BAND: 15-.30 TO 23.0-25.0 Hz. 89324-C0138-92118.04 113072.1547-QP92A324C2

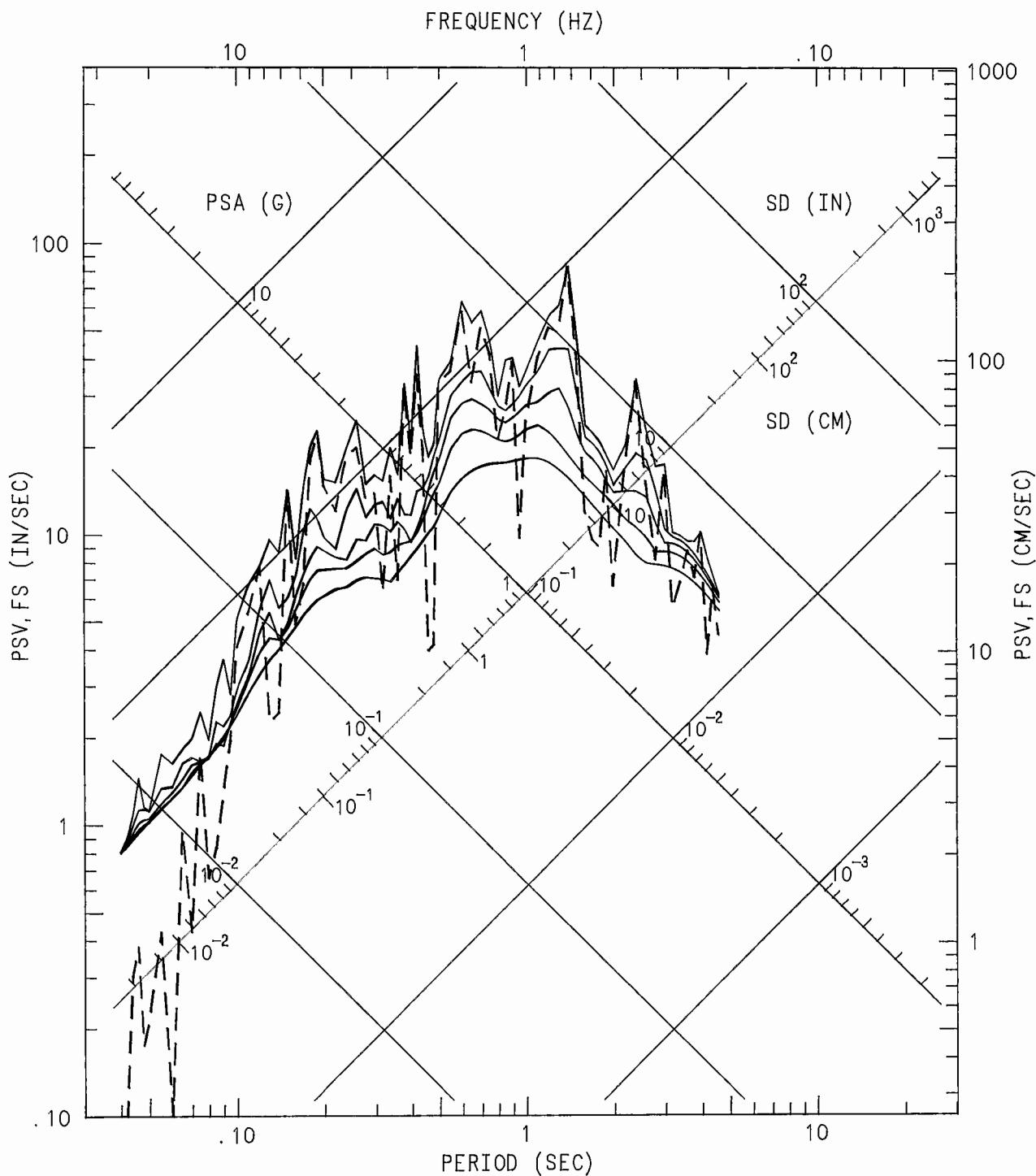


CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS CHN 12 (STA CHN 20): 360 DEG (ON GROUND NEAR WEST ABUTMENT)
 INSTRUMENT-CORRECTED AND BANDPASS-FILTERED ACCELERATION, VELOCITY AND DISPLACEMENT
 FILTER BAND: .15-.30 TO 23.0-25.0 HZ. 89324-C0138-92118.04 113072.1547-QP92A324C2

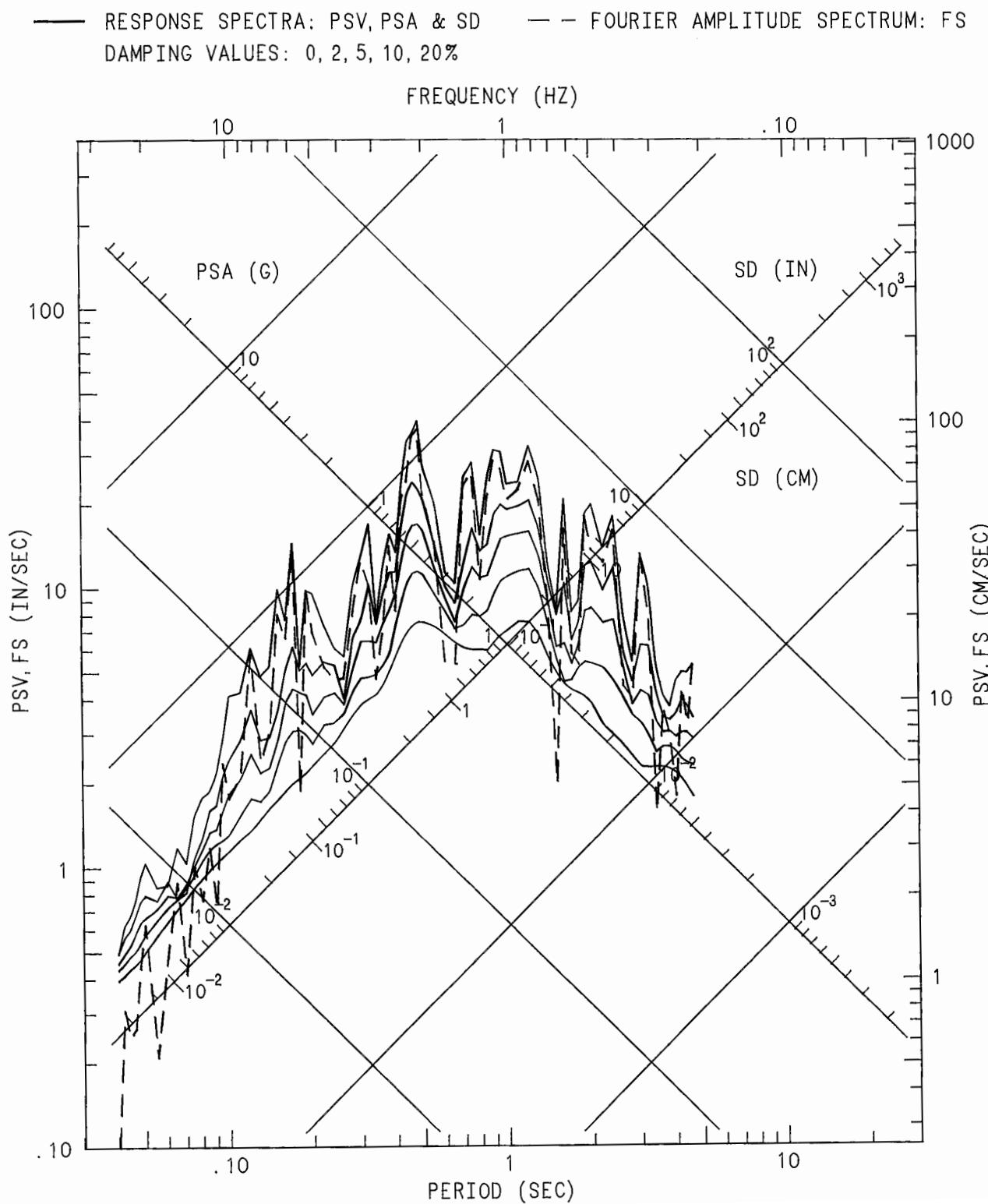


CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS
 CHN 1: 270 DEG (BASE OF CENTER BENT)
 ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 Hz.
 89324-C0161-92118.04 120172.1349-QP92A324

— RESPONSE SPECTRA: PSV, PSA & SD — — FOURIER AMPLITUDE SPECTRUM: FS
 DAMPING VALUES: 0, 2, 5, 10, 20%

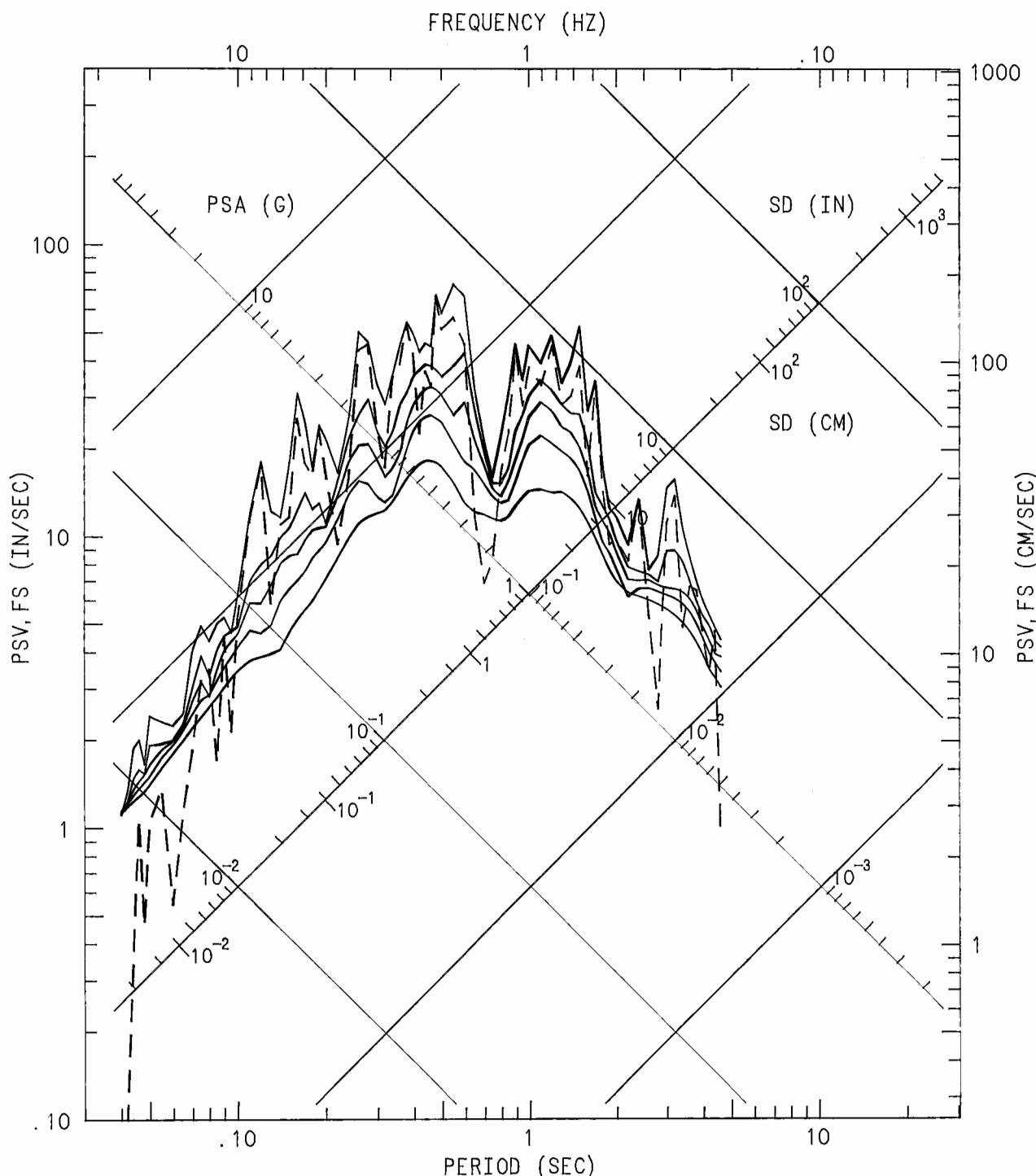


CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS
 CHN 2: UP (BASE OF CENTER BENT)
 ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 HZ.
 89324-C0161-92118.04 120172.1349-QP92A324



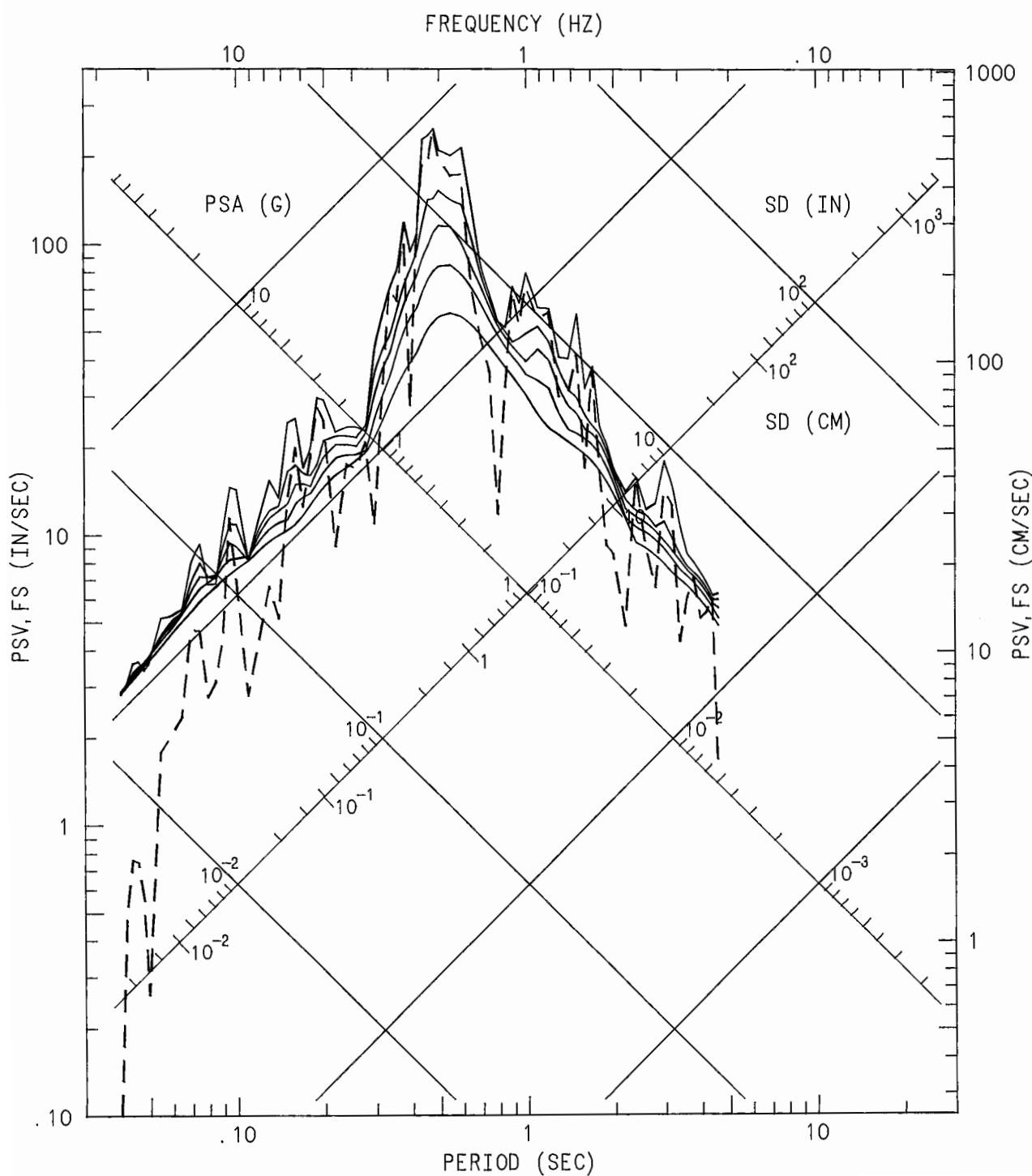
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS
 CHN 3: 360 DEG (BASE OF CENTER BENT)
 ACCELEROGRAF BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 Hz.
 89324-C0161-92118.04 120172.1349-QP92A324

— RESPONSE SPECTRA: PSV, PSA & SD — — FOURIER AMPLITUDE SPECTRUM: FS
 DAMPING VALUES: 0, 2, 5, 10, 20%



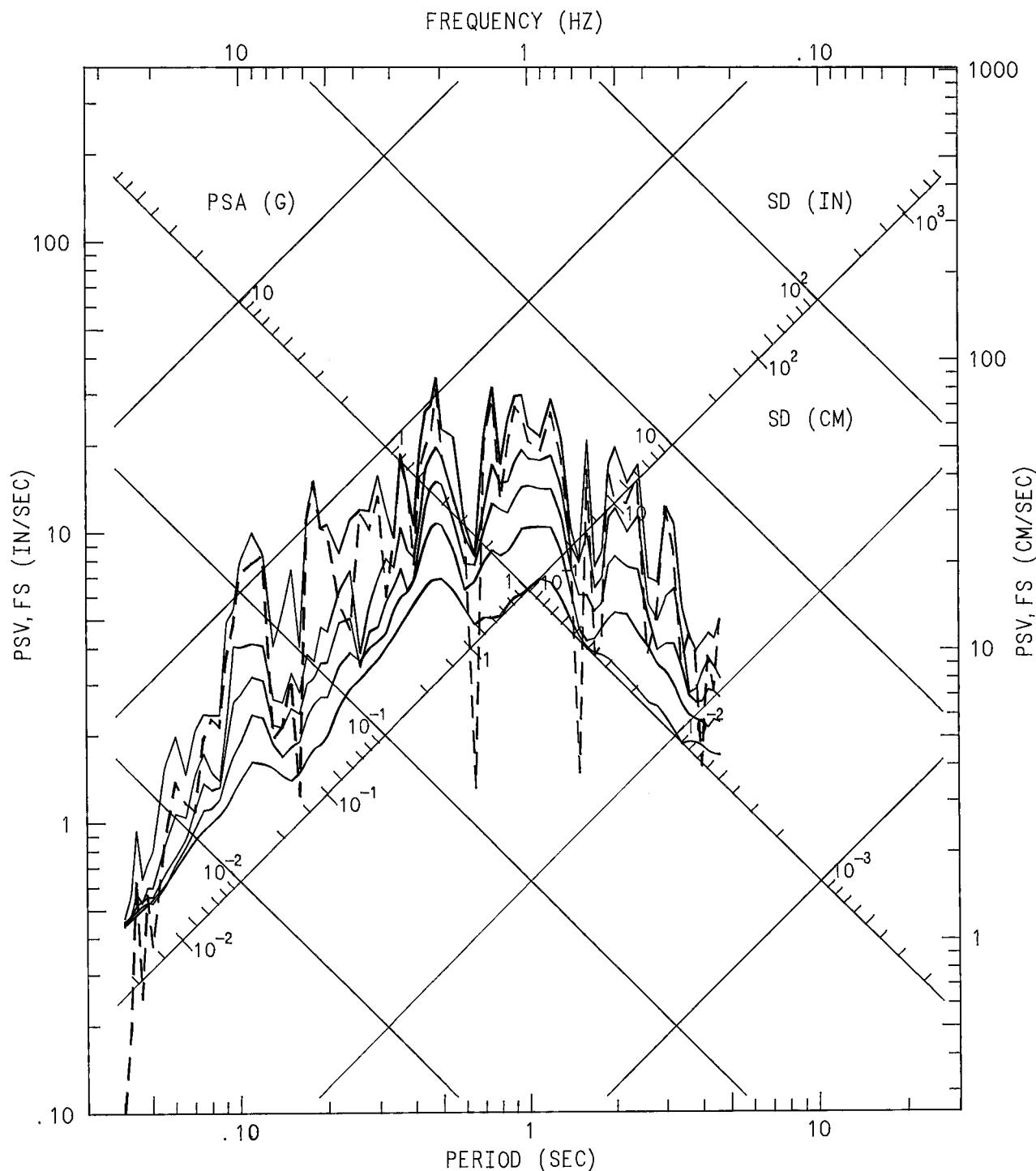
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS
 CHN 4: 360 DEG (DECK, NEAR WEST ABUTMENT)
 ACCELEROGRAF BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 Hz.
 88324-C0161-92118.04 120172.1349-QP92A324

— RESPONSE SPECTRA: PSV, PSA & SD — — FOURIER AMPLITUDE SPECTRUM: FS
 DAMPING VALUES: 0, 2, 5, 10, 20%



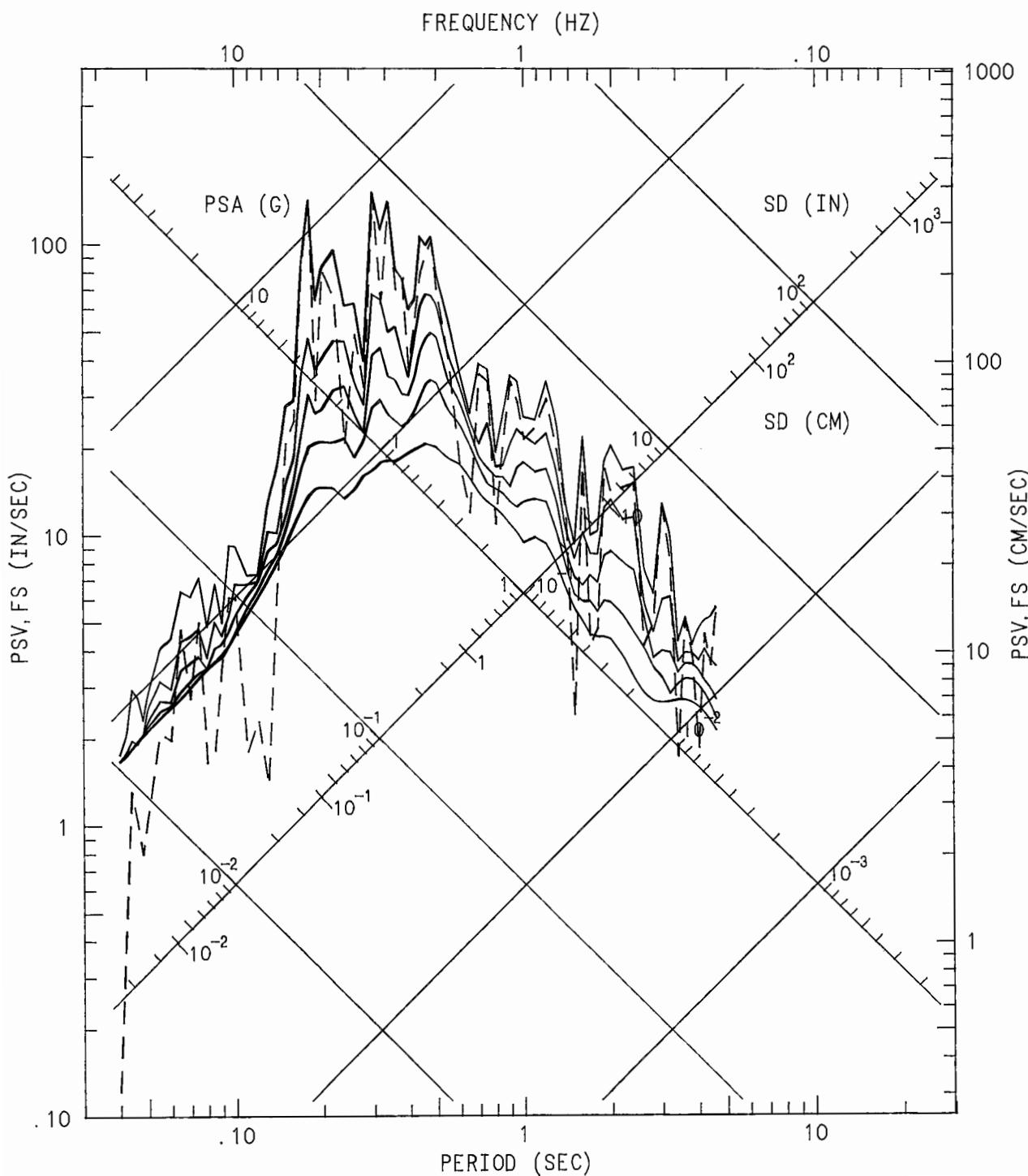
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS
 CHN 5: UP (DECK, NEAR WEST ABUTMENT)
 ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 Hz.
 89324-C0161-92118.04 120172.1349-QP92A324

— RESPONSE SPECTRA: PSV, PSA & SD — FOURIER AMPLITUDE SPECTRUM: FS
 DAMPING VALUES: 0, 2, 5, 10, 20%

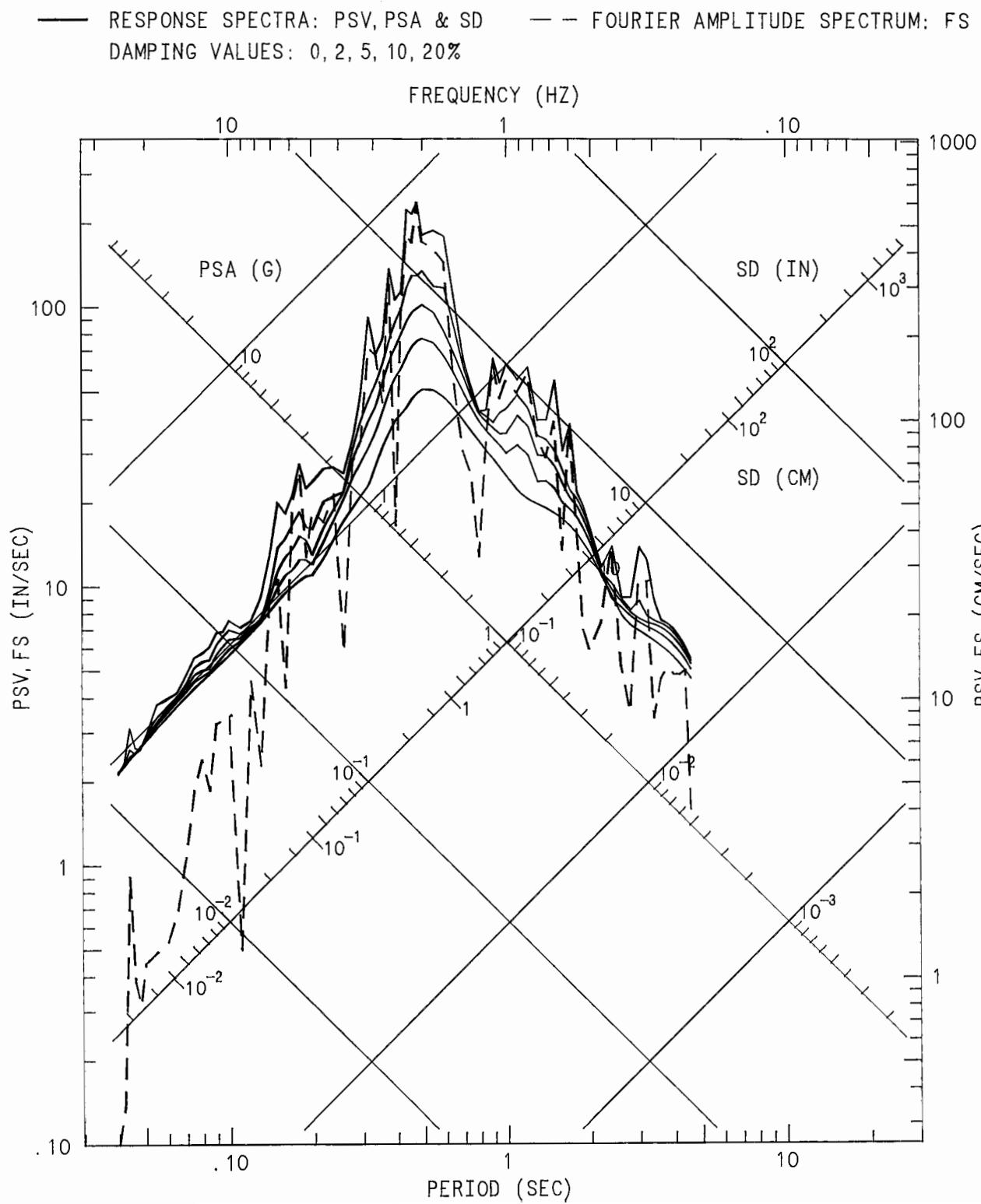


CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS
 CHN 6: UP (DECK, CENTER OF WEST SPAN)
 ACCELEROMGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 Hz.
 89324-C0161-92118.04 120172.1349-QP92A324

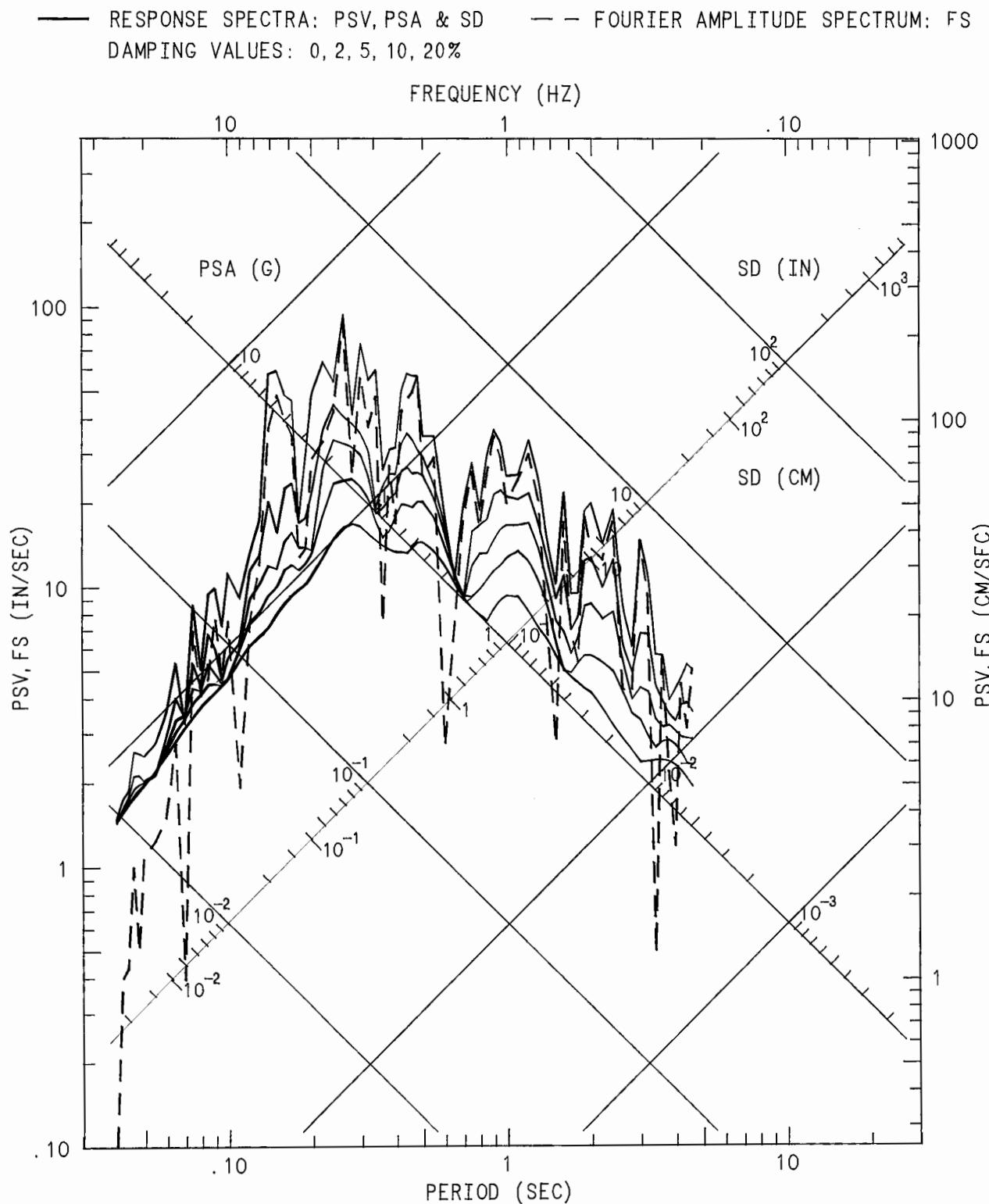
— RESPONSE SPECTRA: PSV, PSA & SD — — FOURIER AMPLITUDE SPECTRUM: FS
 DAMPING VALUES: 0, 2, 5, 10, 20%



CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS
 CHN 7: 360 DEG (UNDERSIDE OF GIRDER AT CENTER BENT)
 ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 Hz.
 89324-C0161-92118.04 120172.1349-QP92A324

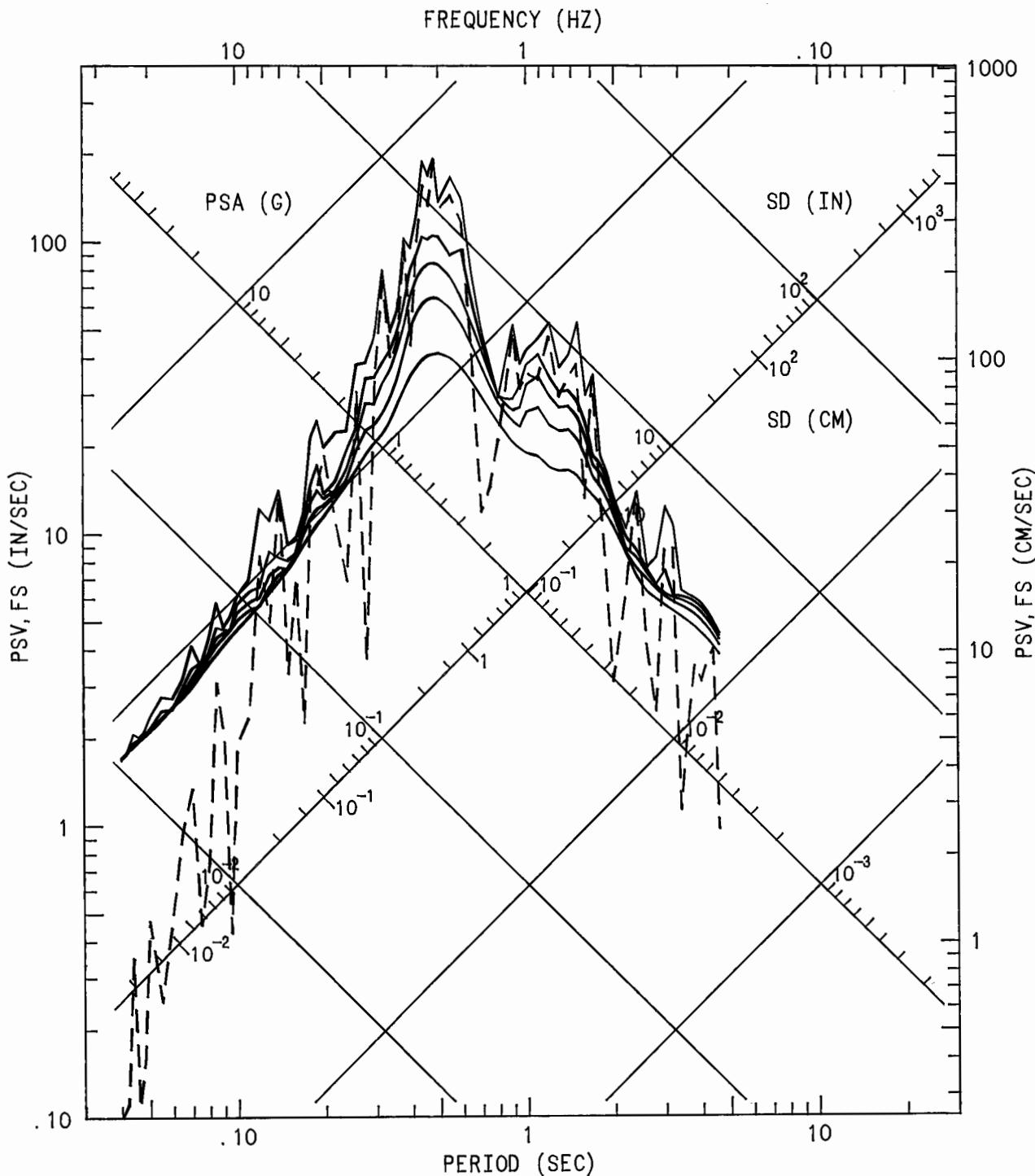


CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS
 CHN 8: UP (DECK, CENTER OF EAST SPAN)
 ACCELEROGRAF BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 Hz.
 89324-C0161-92118.04 120172.1349-QP92A324

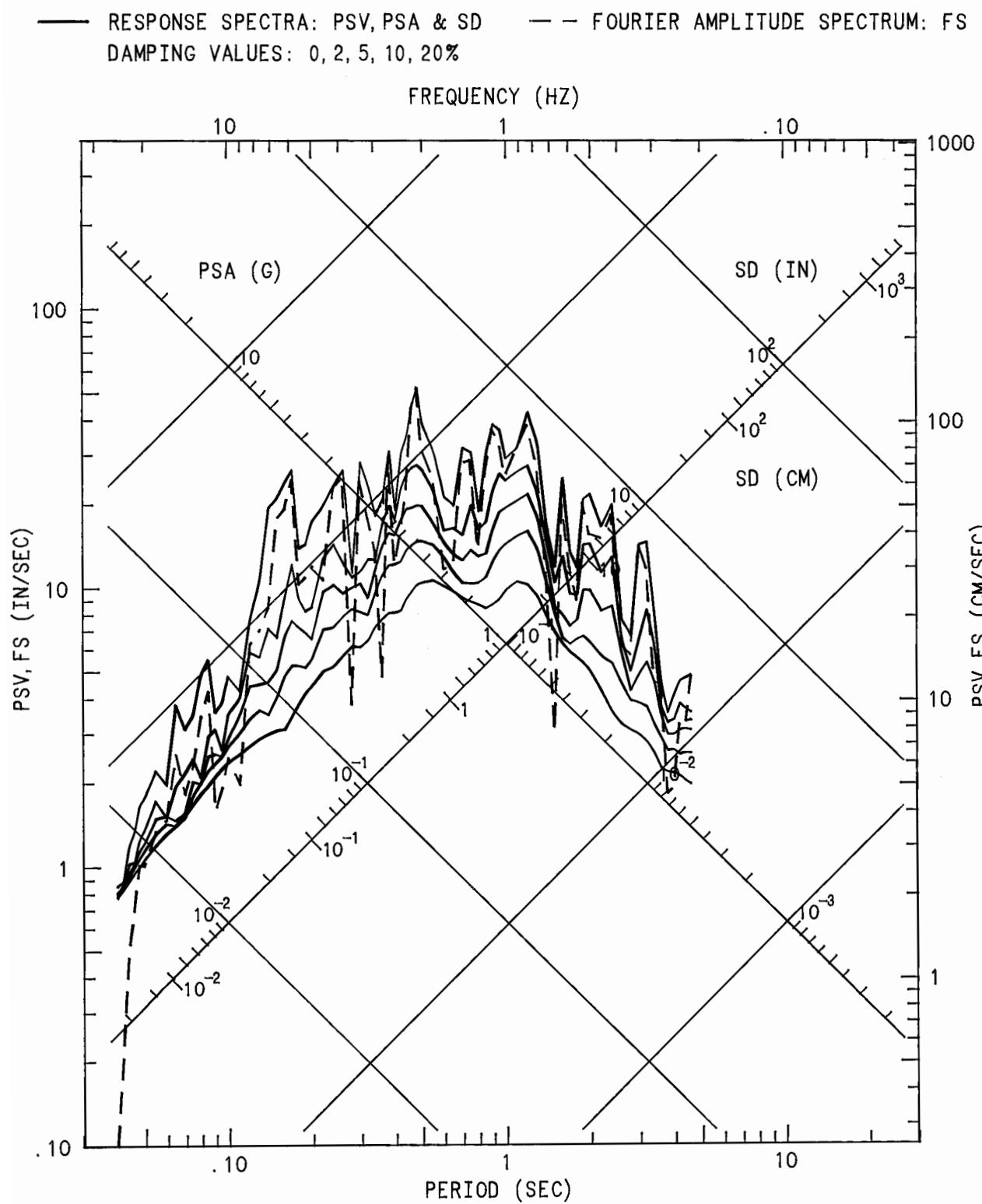


CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS
 CHN 1 (STA CHN 9): 360 DEG (DECK, NEAR EAST ABUTMENT)
 ACCELEROGRAF BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 Hz.
 89324-C0138-92118.04 120172.1702-QP92A324C2

— RESPONSE SPECTRA: PSV, PSA & SD — — FOURIER AMPLITUDE SPECTRUM: FS
 DAMPING VALUES: 0, 2, 5, 10, 20%

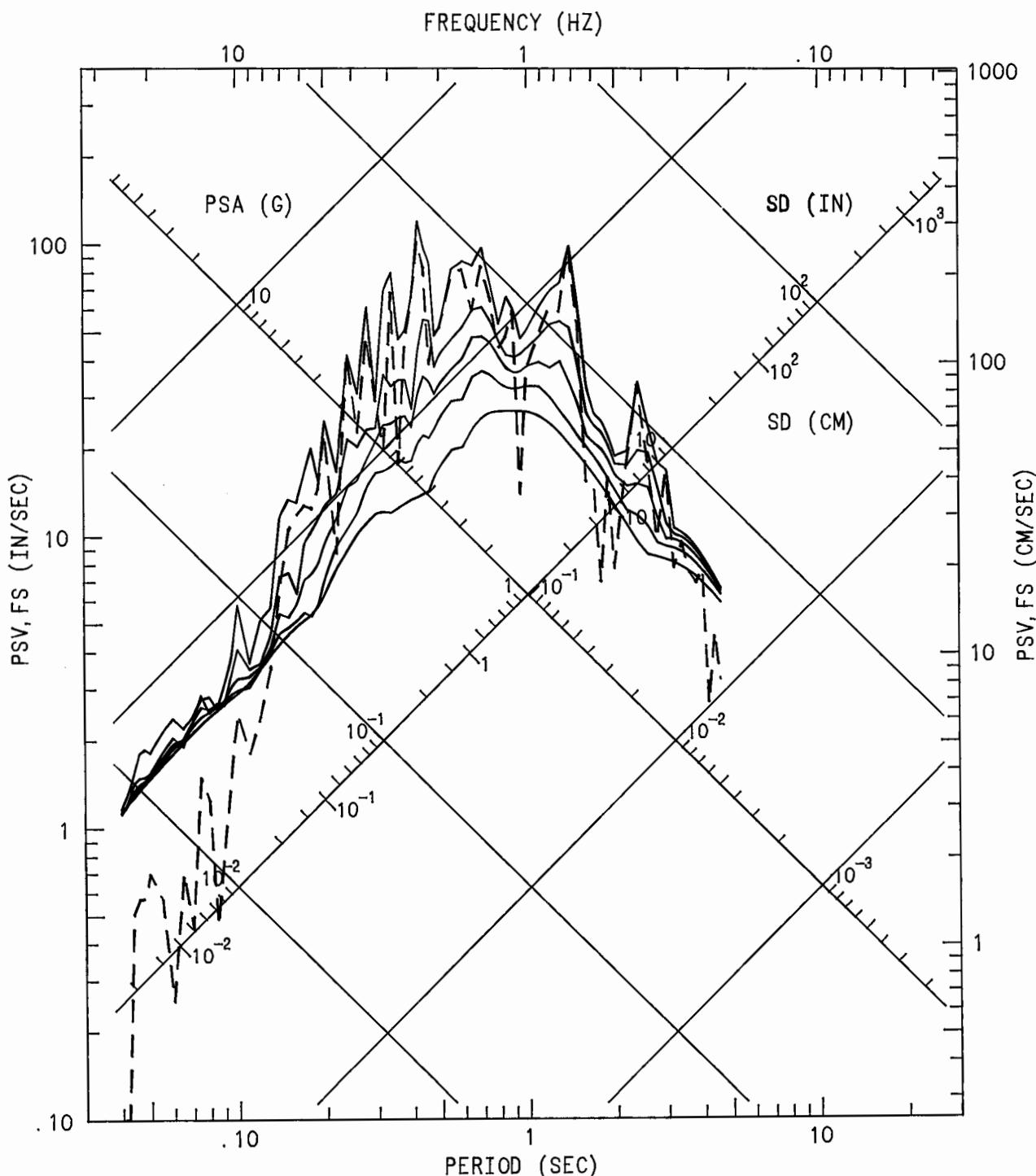


CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS
 CHN 2 (STA CHN 10): UP (DECK, NEAR EAST ABUTMENT)
 ACCELEROMGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 Hz.
 89324-C0138-92118.04 120172.1702-QP92A324C2

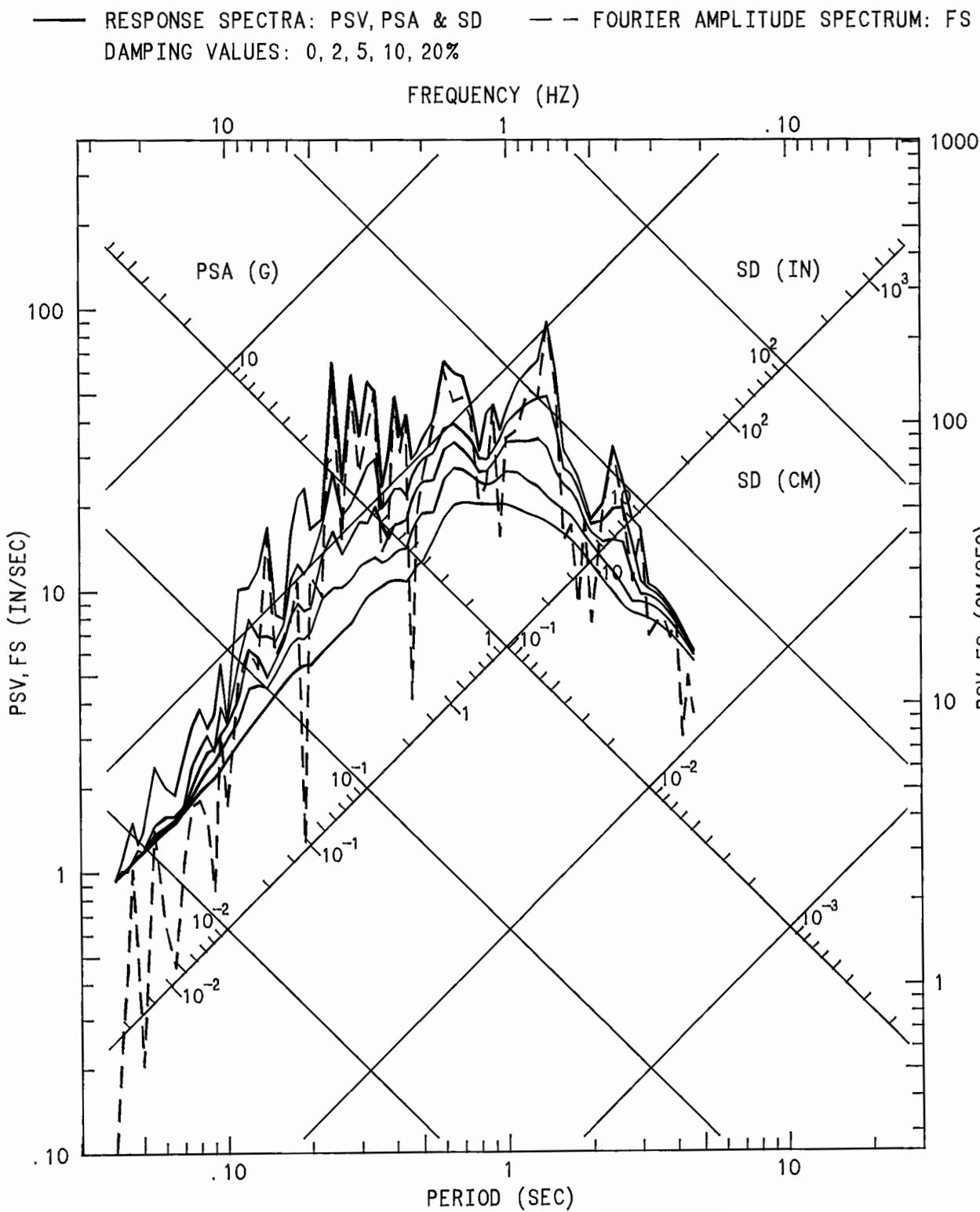


CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS
 CHN 3 (STA CHN 11): 270 DEG (DECK, NEAR EAST ABUTMENT)
 ACCELEROGRAF BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 Hz.
 89324-C0138-92118.04 120172.1702-QP92A324C2

— RESPONSE SPECTRA: PSV, PSA & SD — — FOURIER AMPLITUDE SPECTRUM: FS
 DAMPING VALUES: 0, 2, 5, 10, 20%

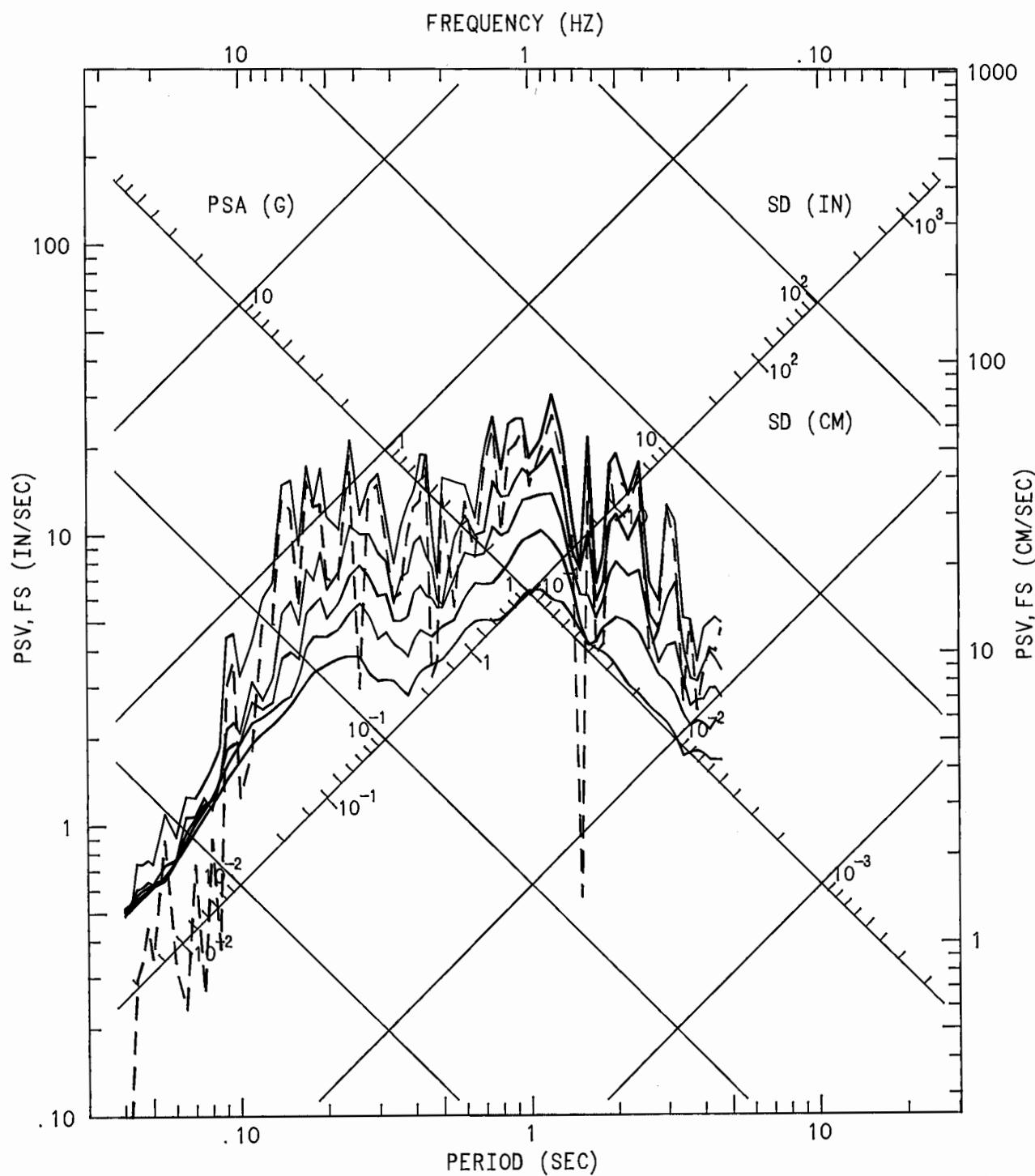


CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS
 CHN 4 (STA CHN 12): 270 DEG (FREE FIELD)
 ACCELEROGRAF BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 Hz.
 89324-C0138-92118.04 120172.1702-QP92A324C2

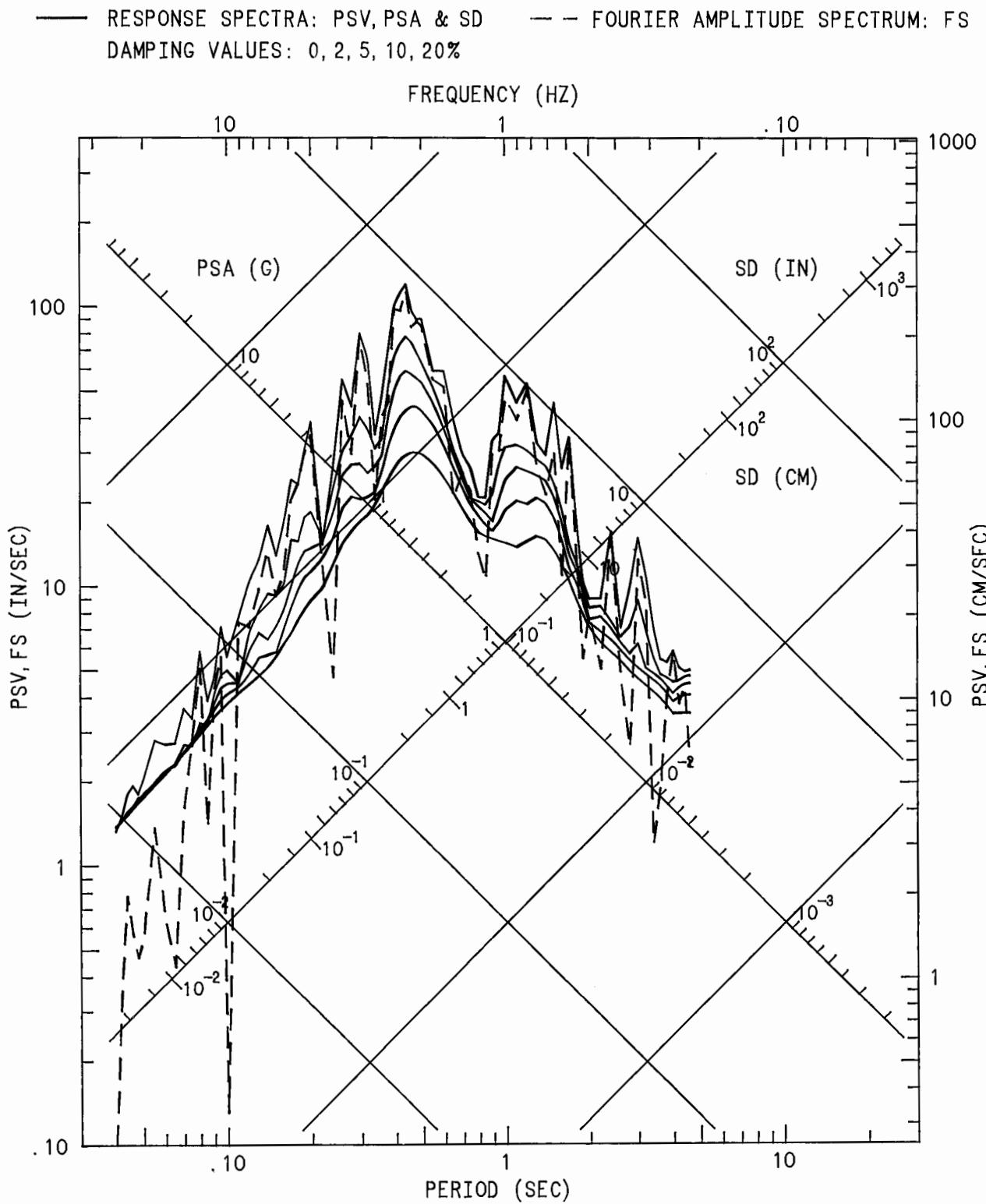


CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS
 CHN 5 (STA CHN 13): UP (FREE FIELD)
 ACCELEROMGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 Hz.
 89324-C0138-92118.04 120172.1702-QP92A324C2

— RESPONSE SPECTRA: PSV, PSA & SD —— FOURIER AMPLITUDE SPECTRUM: FS
 DAMPING VALUES: 0, 2, 5, 10, 20%

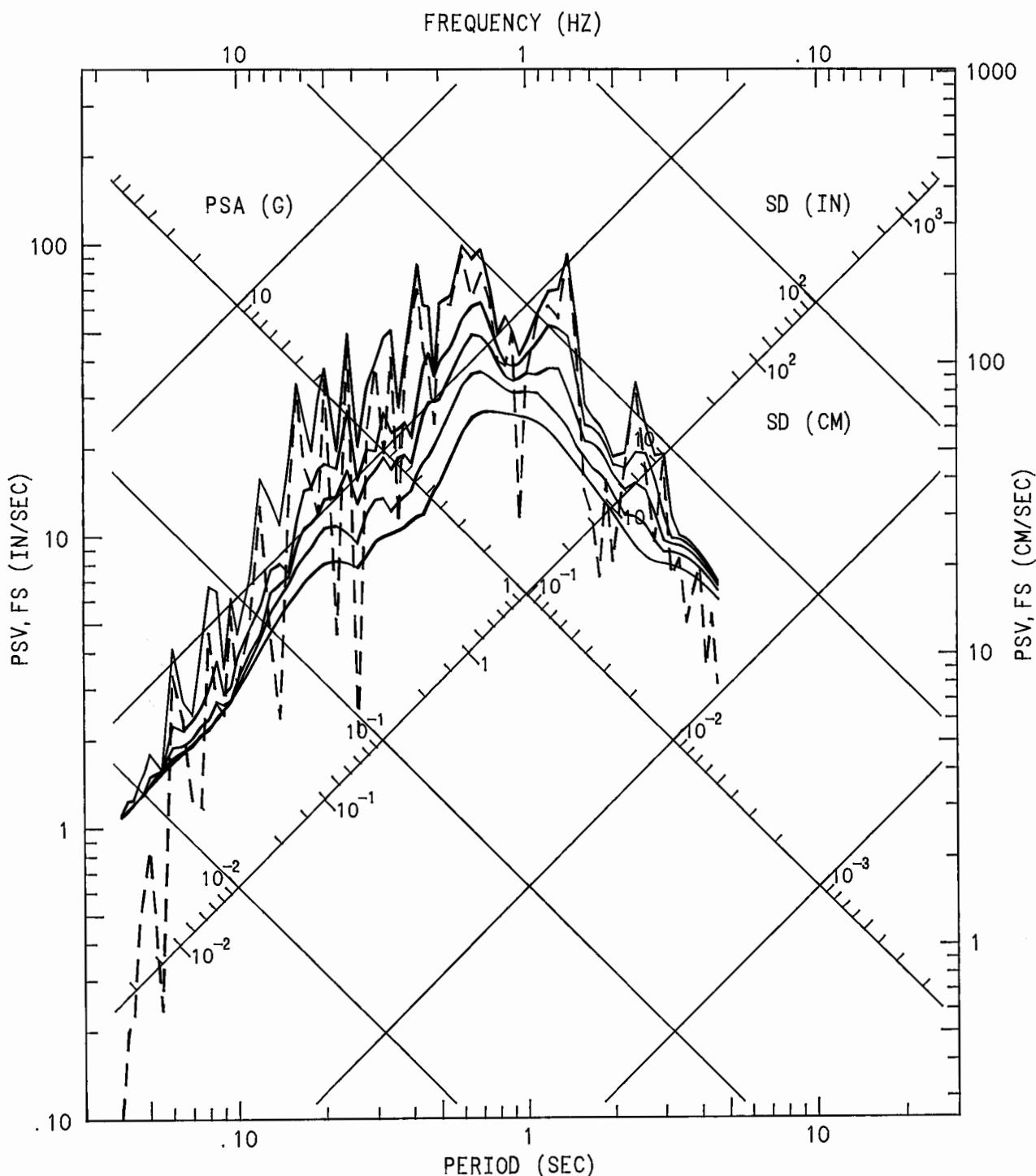


CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS
 CHN 6 (STA CHN 14): 360 DEG (FREE FIELD)
 ACCELEROMGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 Hz.
 89324-C0138-92118.04 120172.1702-QP92A324C2

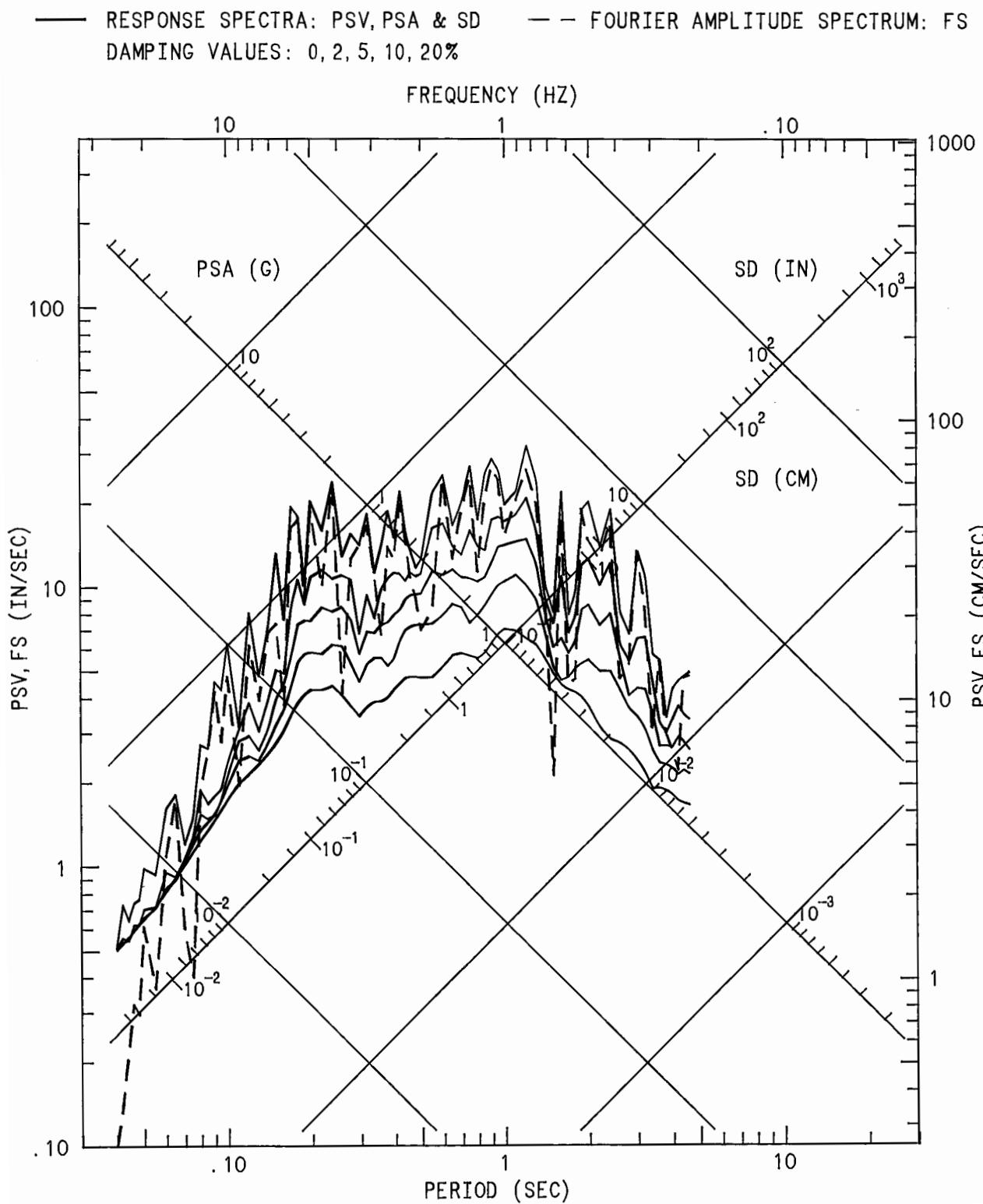


CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS
 CHN 7 (STA CHN 15): 270 DEG (ON GROUND NEAR EAST ABUTMENT)
 ACCELEROMGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 Hz.
 89324-C0138-92118.04 120172.1702-QP92A324C2

— RESPONSE SPECTRA: PSV, PSA & SD - - - FOURIER AMPLITUDE SPECTRUM: FS
 DAMPING VALUES: 0, 2, 5, 10, 20%

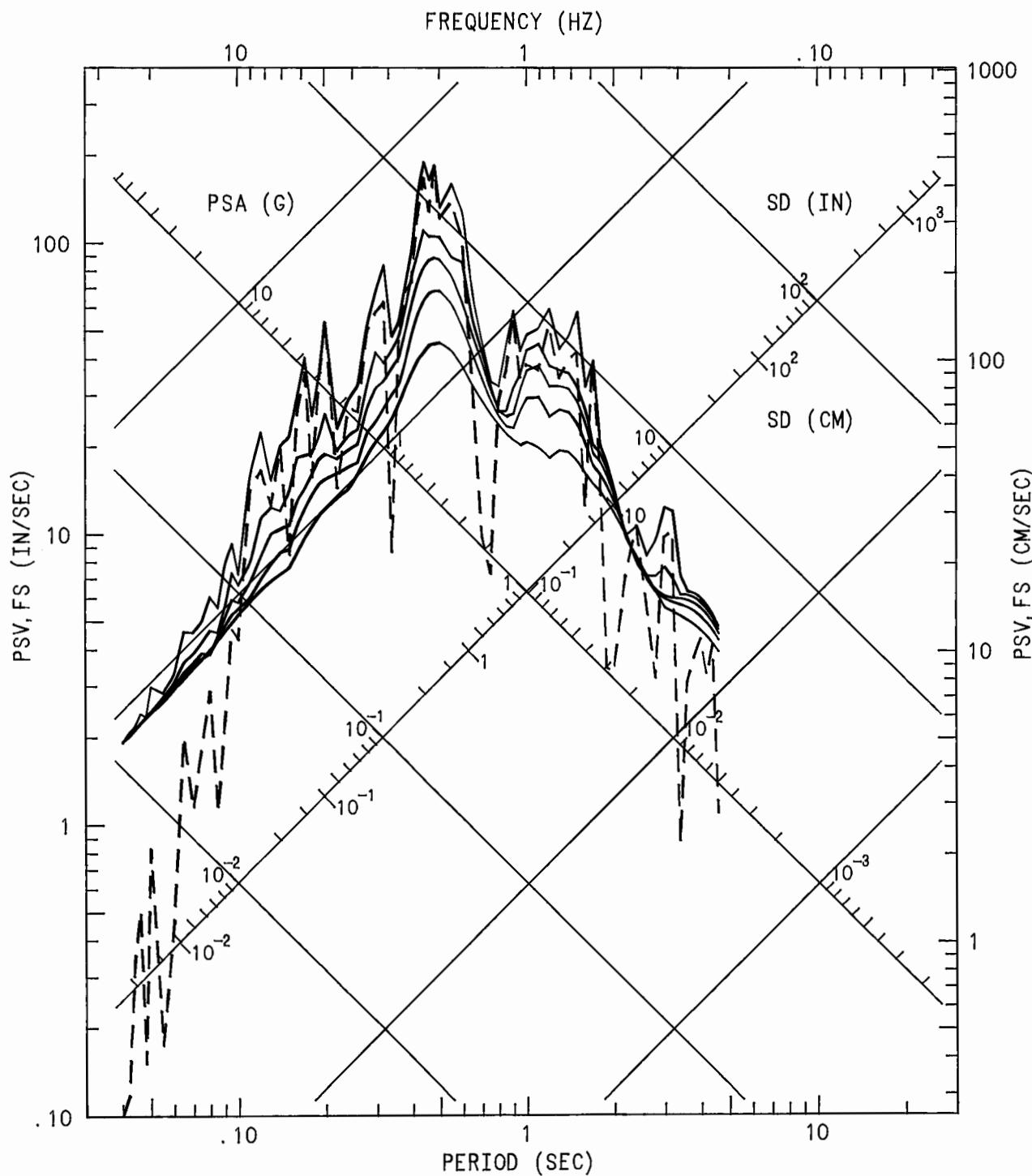


CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS
 CHN 8 (STA CHN 16): UP (ON GROUND NEAR EAST ABUTMENT)
 ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 Hz.
 89324-C0138-92118.04 120172.1702-QP92A324C2



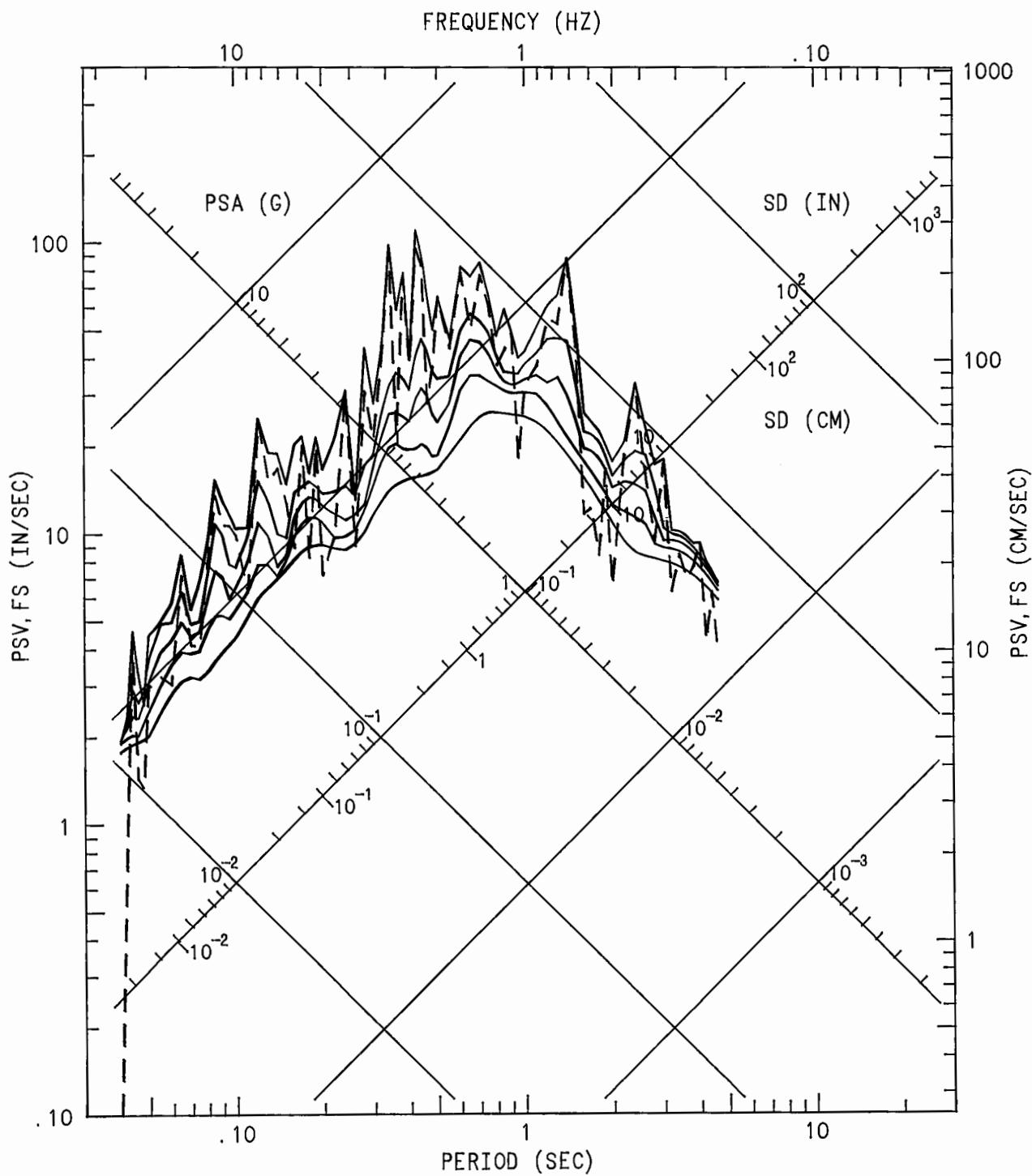
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS
 CHN 9 (STA CHN 17): 360 DEG (ON GROUND NEAR EAST ABUTMENT)
 ACCELEROMGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 Hz.
 89324-C0138-92118.04 120172.1702-QP92A324C2

— RESPONSE SPECTRA: PSV, PSA & SD — — FOURIER AMPLITUDE SPECTRUM: FS
 DAMPING VALUES: 0, 2, 5, 10, 20%



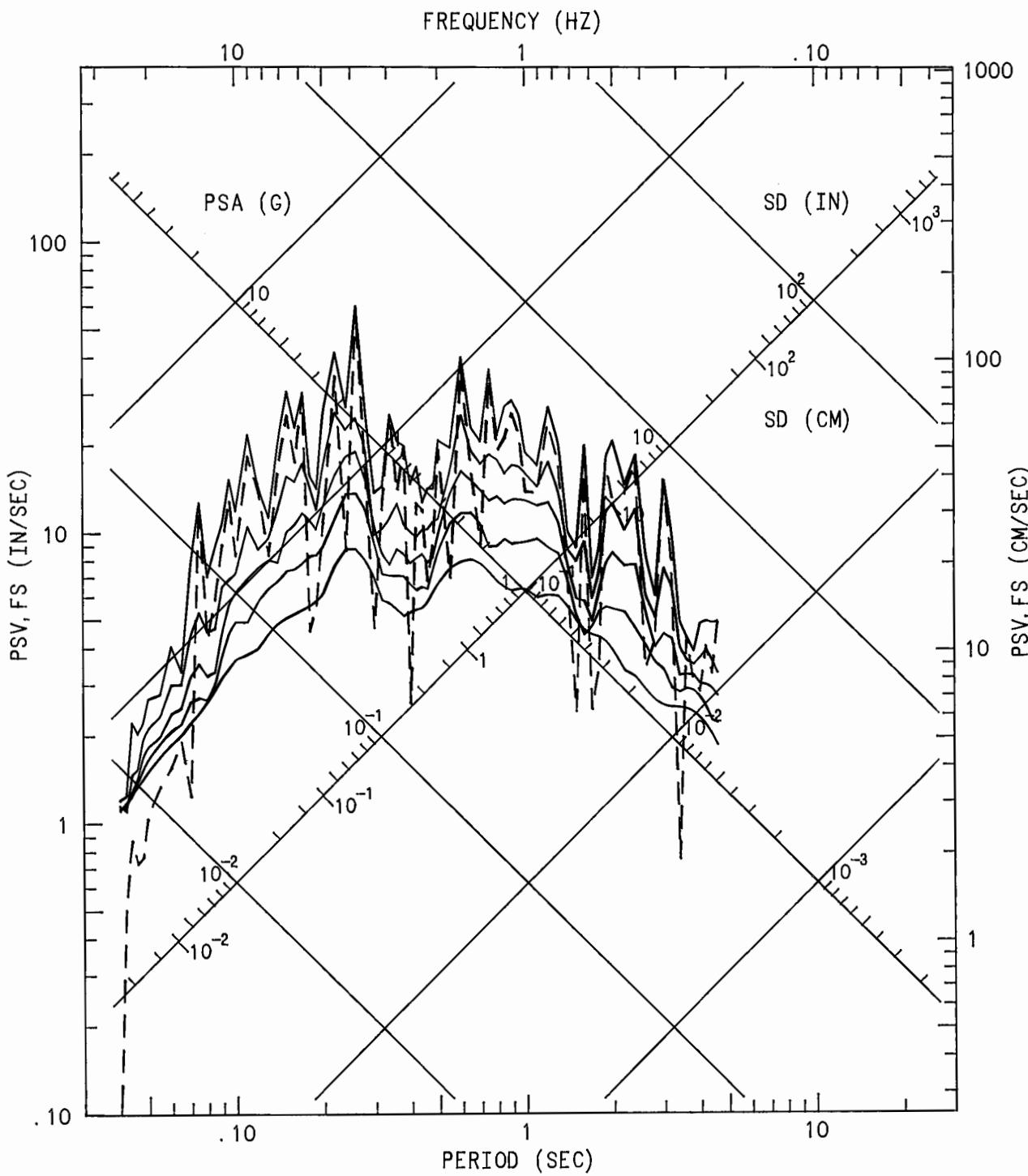
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS
 CHN 10 (STA CHN 18): 270 DEG (ON GROUND NEAR WEST ABUTMENT)
 ACCELEROMGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 Hz.
 89324-C0138-92118.04 120172.1702-QP92A324C2

— RESPONSE SPECTRA: PSV, PSA & SD — — FOURIER AMPLITUDE SPECTRUM: FS
 DAMPING VALUES: 0, 2, 5, 10, 20%

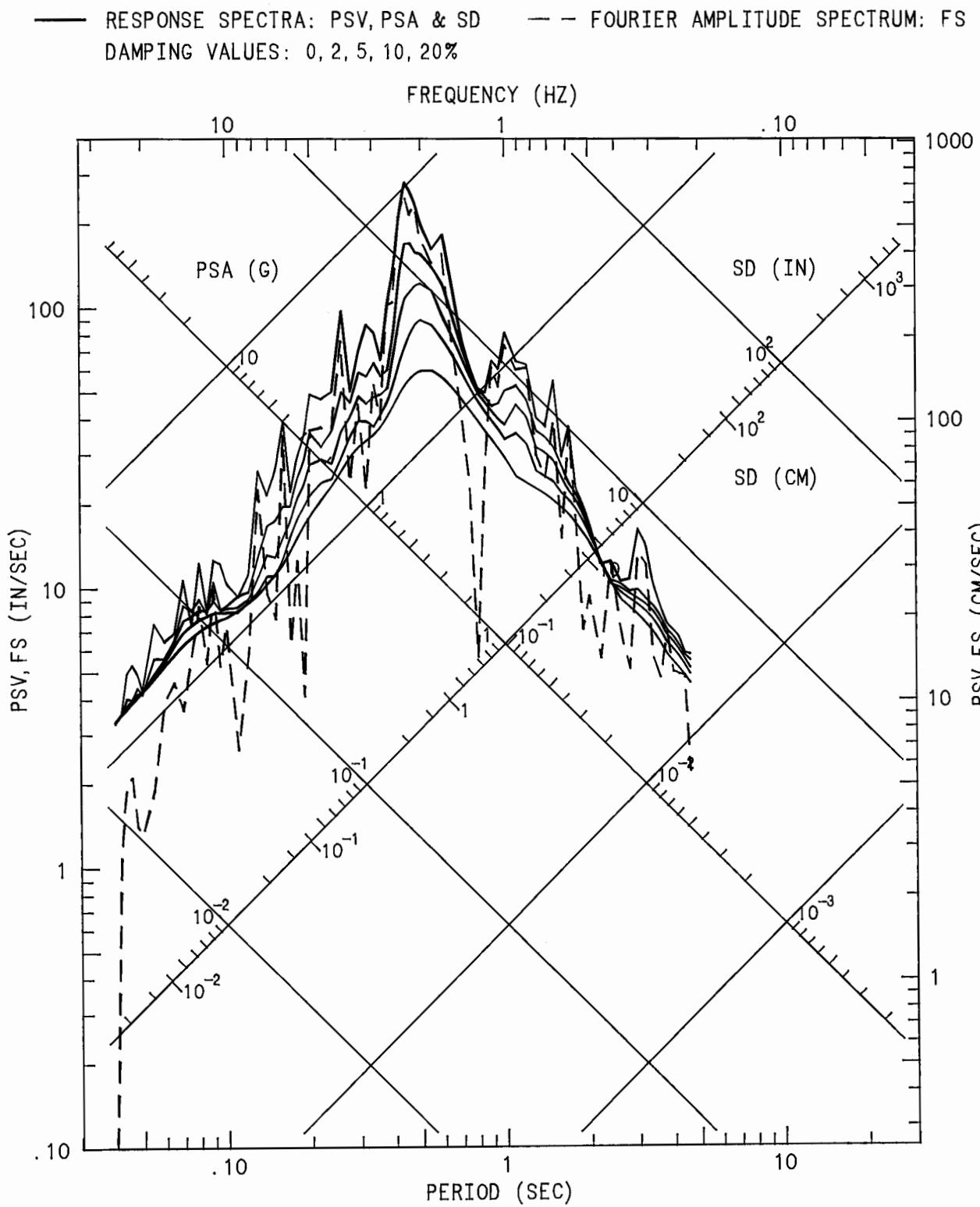


CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS
 CHN 11 (STA CHN 19): UP (ON GROUND NEAR WEST ABUTMENT)
 ACCELEROMGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 Hz.
 89324-C0138-92118.04 120172.1702-QP92A324C2

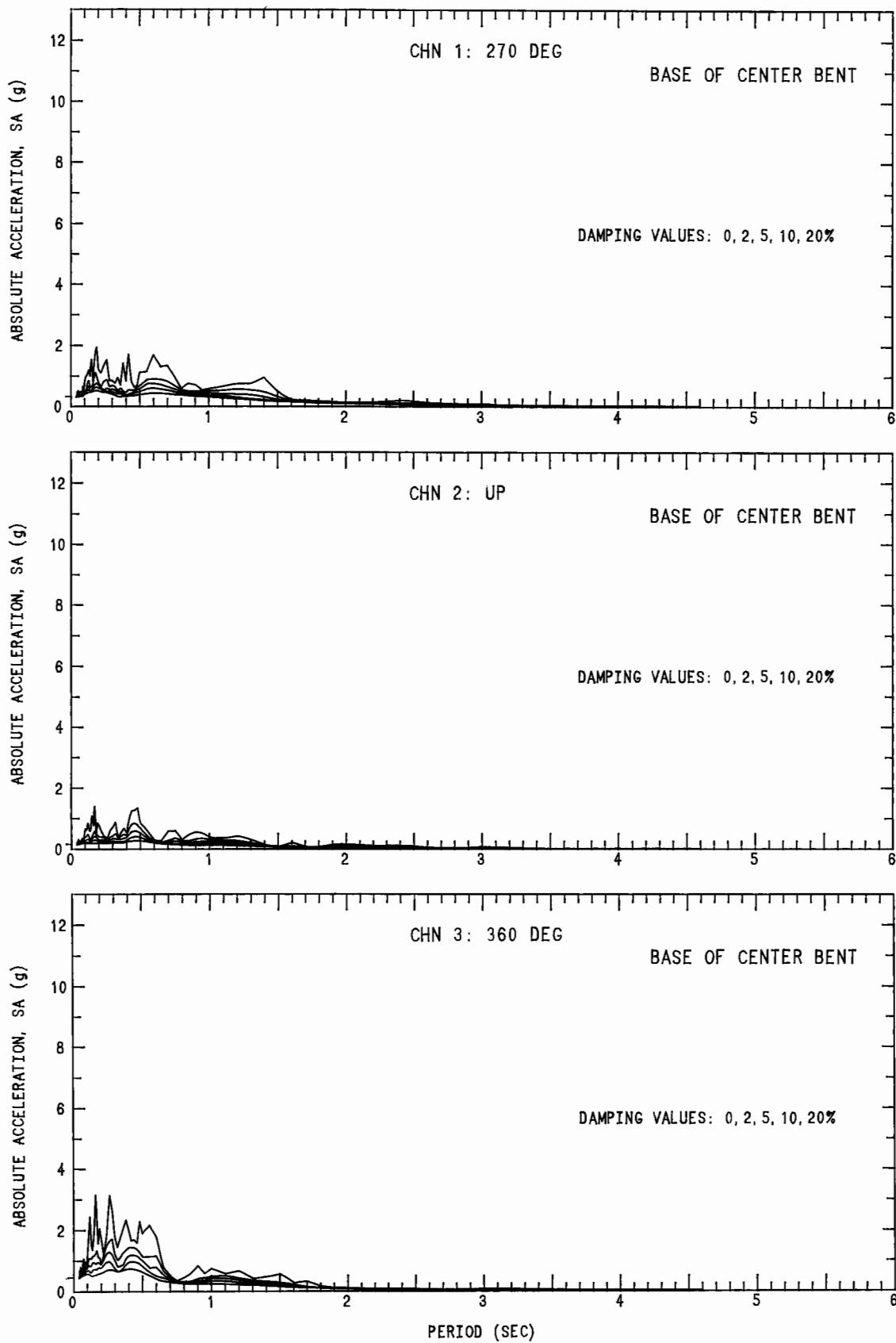
— RESPONSE SPECTRA: PSV, PSA & SD — — FOURIER AMPLITUDE SPECTRUM: FS
 DAMPING VALUES: 0, 2, 5, 10, 20%



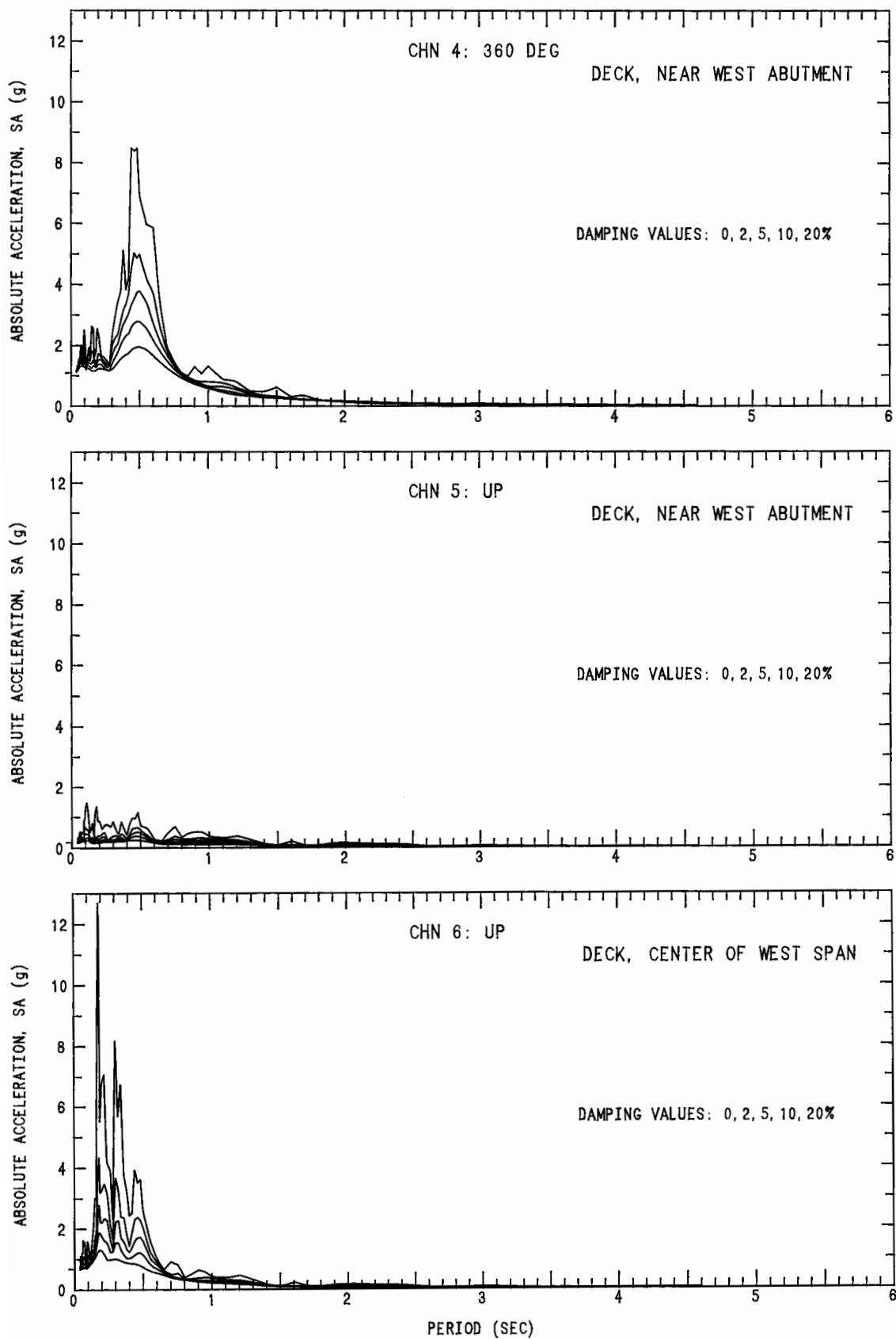
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
 RIO DELL - 101/PAINTER ST. OVERPASS
 CHN 12 (STA CHN 20): 360 DEG (ON GROUND NEAR WEST ABUTMENT)
 ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 Hz.
 89324-C0138-92118.04 120172.1702-QP92A324C2



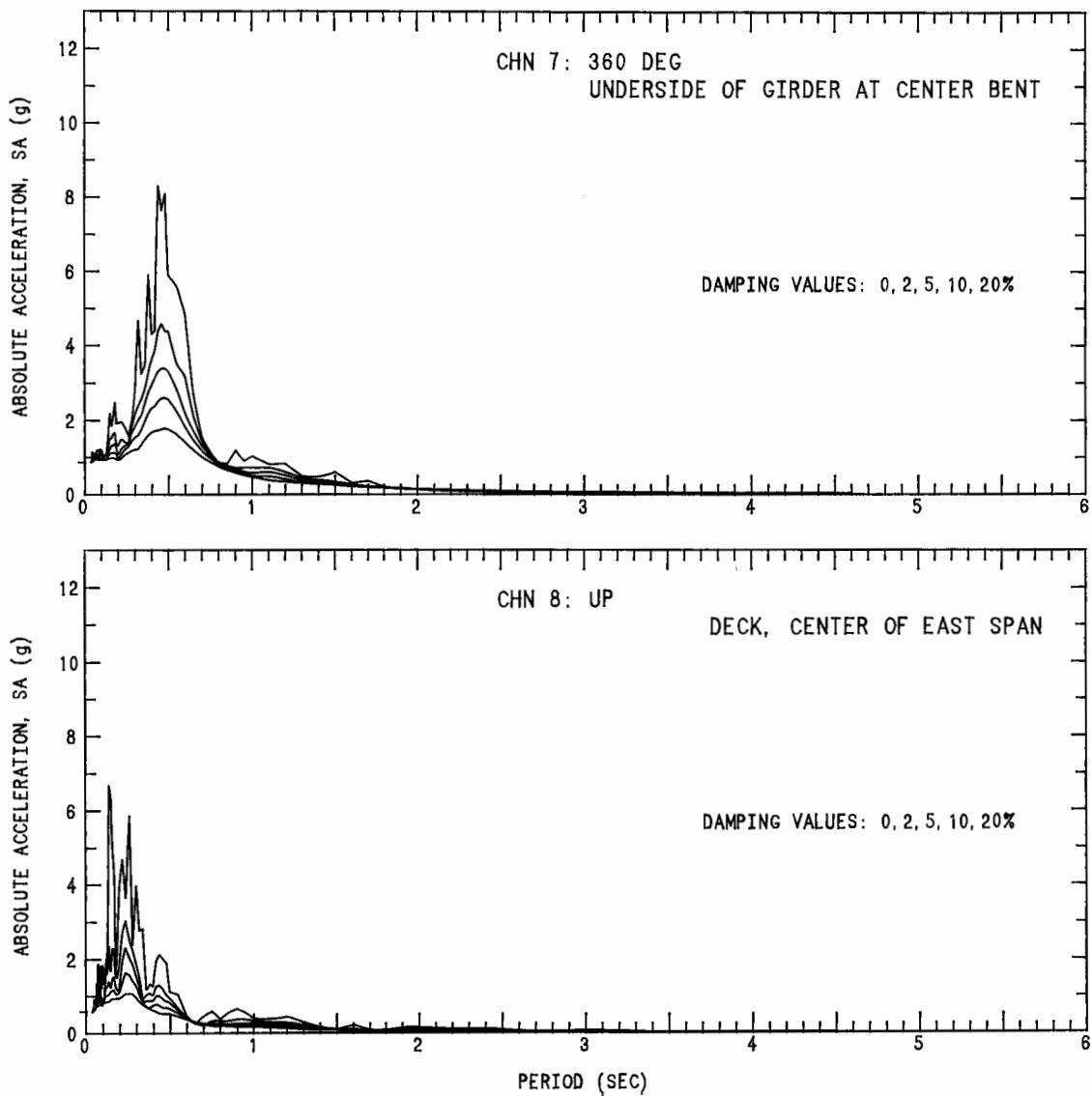
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
RIO DELL - 101/PAINTER ST. OVERPASS
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 HZ.
89324-C0161-92118.04 113072.1349-QP92A324



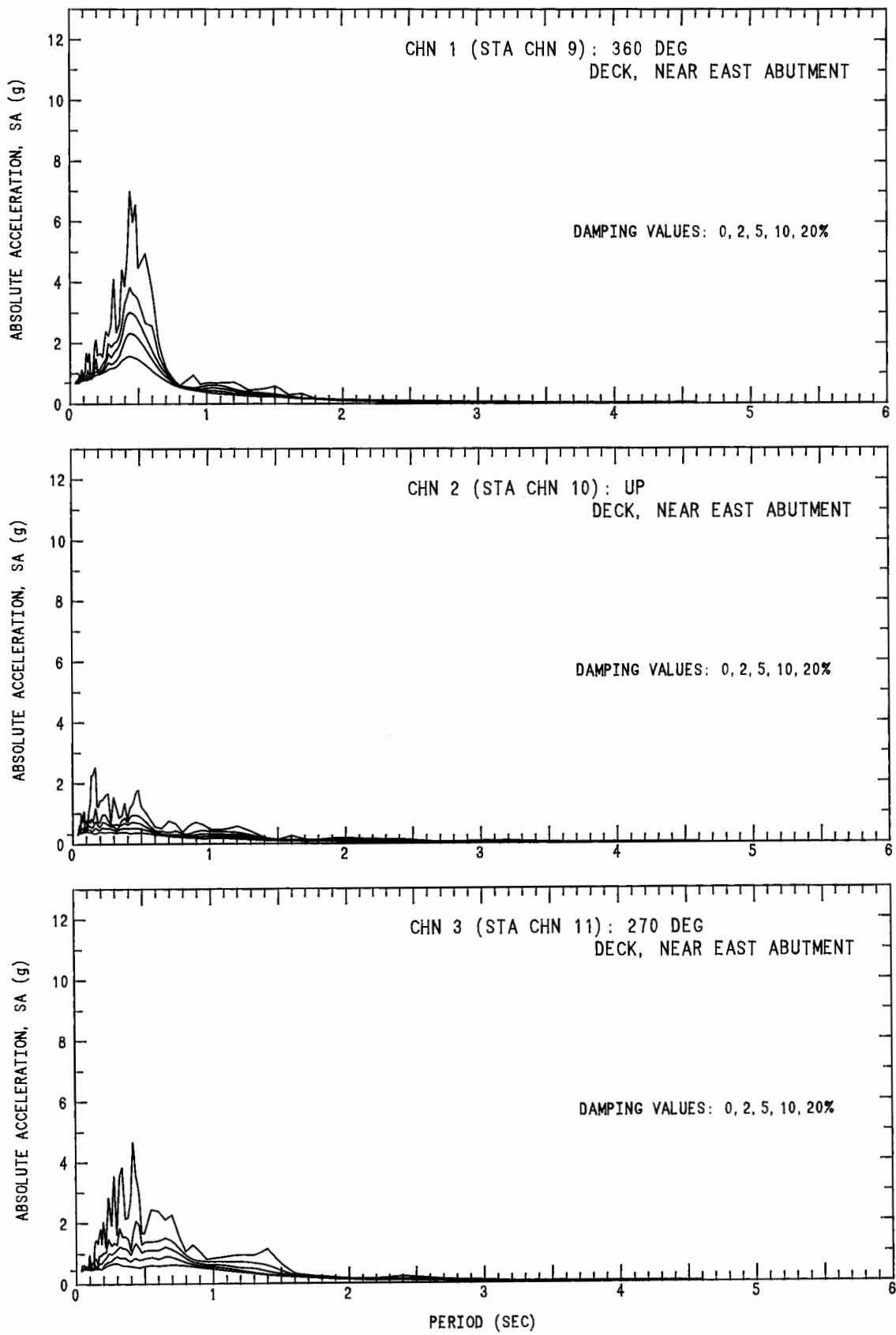
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
RIO DELL - 101/PAINTER ST. OVERPASS
ACCELEROGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 HZ.
88324-C0161-92118.04 113072.1349-QP92A324



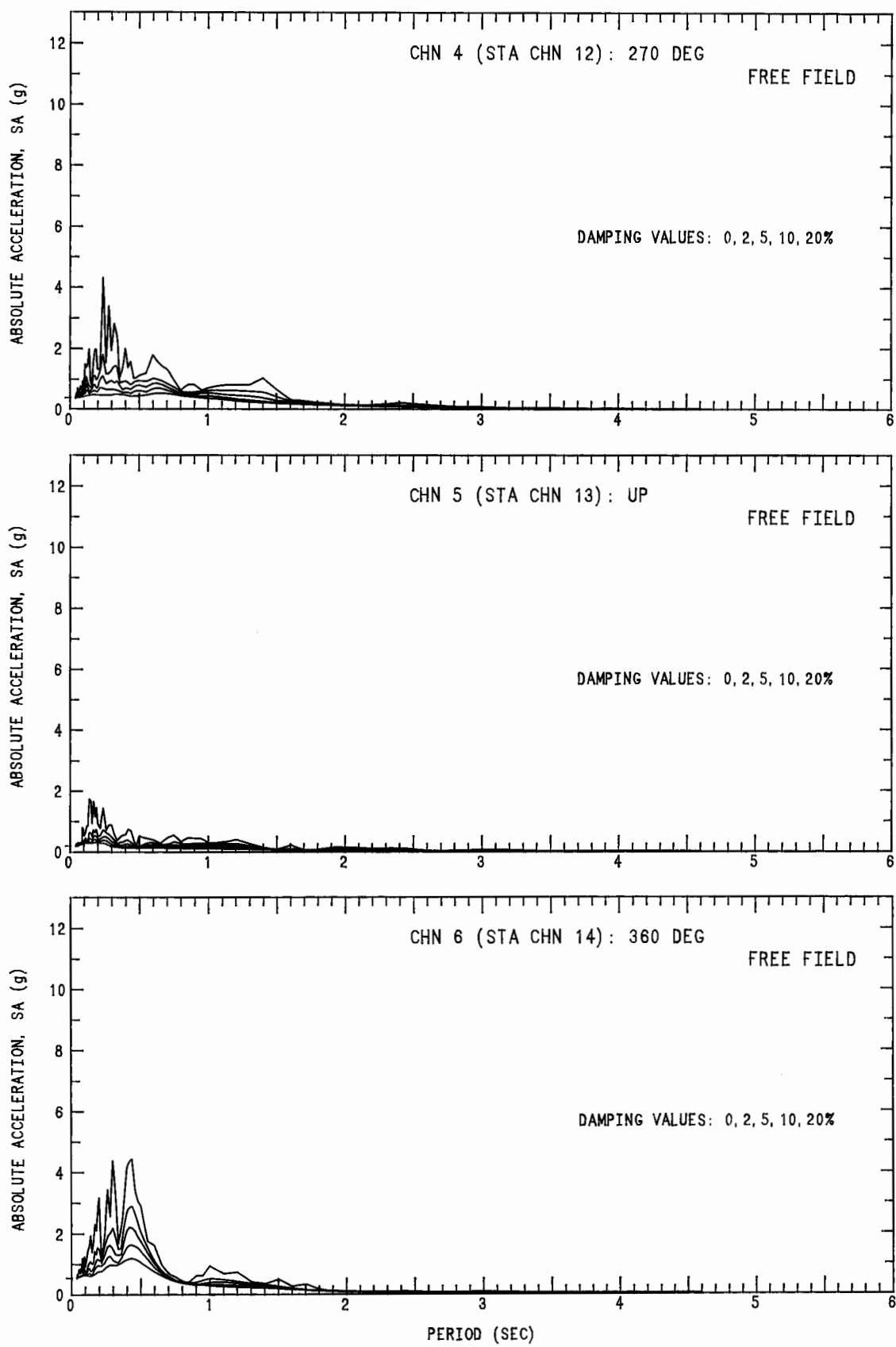
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
RIO DELL - 101/PAINTER ST. OVERPASS
ACCELEROMGRAM BANDPASS-FILTERED WITH RAMPS AT .15-.30 TO 23.0-25.0 HZ.
89324-C0161-92118.04 113072.1349-QP92A324



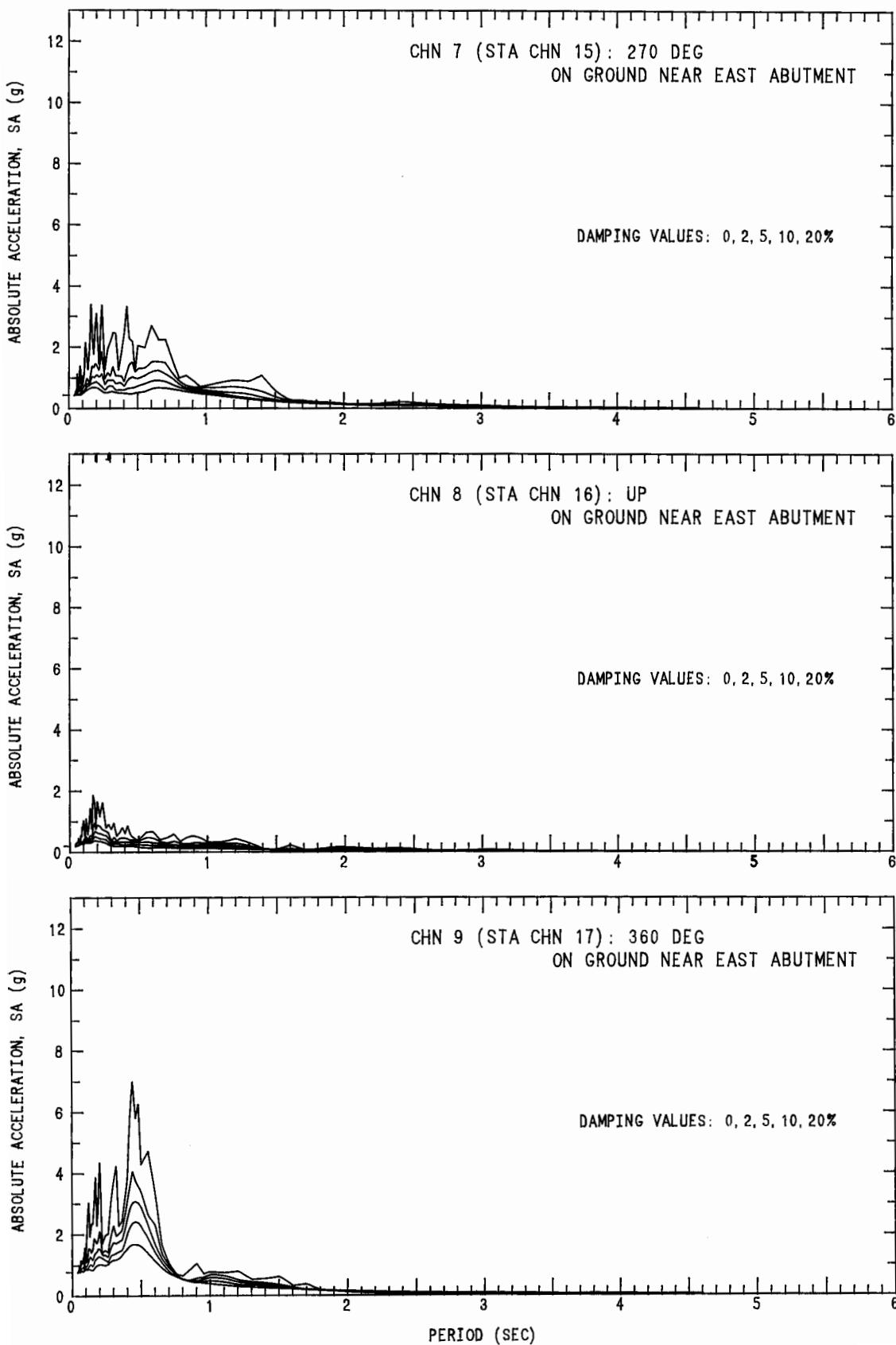
CAPE MENDOCINO/PETROLIA EARTHQUAKE APRIL 25, 1992 11:06 PDT
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